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The Relationship Between Instructional Delivery And Student Engagement In Selected Classrooms: A Cross Case Analysis

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THE RELATIONSHIP BETWEEN INSTRUCTIONAL DELIVERY AND STUDENT ENGAGEMENT IN SELECTED CLASSROOMS: A CROSS-CASE ANALYSIS

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This dissertation was completed in fulfillment of the culminating group research project in compliance with the requirements of the Executive Ed.D. program in Educational Policy, Planning, and Leadership at the College of William and Mary.

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Dedication

We would like to dedicate this dissertation to our families who provided us with unconditional support and constant encouragement throughout this three-year journey. We could not have accomplished this on our own. Thank you for your patience as activities and events were put on hold and the house looked more like a library as we tried to wrap our heads around this entire process. It will be an honor to be able to address and acknowledge our individual dedications.

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Abstract

Student engagement is an essential component to student learning. Miami-Dade County Public Schools (MDCPS) has focused on providing schools with a unified approach to delivering quality classroom instruction. Despite the alignment and commonalities present, underlying issues still need further investigation. Discrepancies within student proficiency and learning gains exist across schools throughout the district. The purpose of the study was to investigate what patterns exist among fourth- and fifth-grade teachers across four schools within the district concerning the use of instructional practices and how these practices relate to levels of student engagement. This study investigated the relationship between student engagement, instructional delivery, and student achievement through a mixed-methods, comparative case analysis. Data were collected through classroom observations of sixteen teachers working in four MDCPS schools. A convergent mixed methods design facilitated a single-phase approach for simultaneously collecting qualitative and quantitative data. Observations provided correlations between High-Order Learning Tasks and Authentic Learning as well as Explicit Instruction with Connecting to Prior Knowledge and Providing Feedback. The primary instructional strategy used was teacher questioning. Furthermore, Student Engagement yielded varied degrees of correlation in association to the Instructional Delivery while compared to the Student Engagement indicators which generated weak correlations. Additional research is needed to identify which instructional strategies may predict higher levels of student engagement in the classroom as well as other observational tools that corroborate various forms of engagement. Professional development in the areas Explicit Instruction, Use of

Questioning, Providing Feedback, and Use of Technology is critical to building teacher capacity.

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CHAPTER 1

INTRODUCTION

Background

Given the national emphasis on high stakes testing and accountability, student achievement is the focus of many stakeholders and policymakers alike. Consequently, school accountability has become the centripetal force of policies and educational reforms (Dee, Jacob, Hoxby, & Ladd, 2010; Weiss & McGuinn, 2016). Historically, school districts established individual accountability measures while adhering to federal and state mandates. In 1965, the *Elementary and Secondary Act* (ESEA) imposed federal accountability measures requiring equal access to education and high academic performance standards. The ESEA was reauthorized in 1994, with the *Improving America's Schools Act* which evolved into the *No Child Left Behind Act* of 2001 (NCLB; Dee et al., 2010). Measures designed to improve student achievement were at the core of the NCLB policy (H. Ladd, 2014). Therefore, states had to shift their focus to establish a statewide accountability system to determine the academic progress of all students (Dee & Jacob, 2011).

Most recently, Congress passed the *Every Student Succeeds Act* (ESSA) (2015) to replace NCLB requirements with a new set of provisions. ESSA is the recent reauthorization of the historical ESEA policy adopted in 1965 to combat poverty (Florida Department of Education, 2018; Zinskie & Rea, 2016). Consistent with ESEA's original purpose, ESSA requires states to provide support for students and schools at risk of

academic failure due to inequitable social and economic conditions (Florida Department of Education, 2018; Zinskie & Rea, 2016). A noteworthy change from NCLB is that ESSA shifts the accountability responsibility back to the states, extending states' latitude for the development of accountability systems (H. Ladd, 2014). While ESSA increases states' flexibility and controls, it also imposes a higher level of responsibility for them to create and implement accountability systems designed to support teaching and learning (Florida Department of Education, 2018; Zinskie & Rea, 2016). Although many of NCLB's required academic indicators remain intact with ESSA, other factors in the new law are used to measure academic success (McGuinn, 2016).

A significant change in the ESSA policy is the requirement for state education agencies to have an accountability system that is State determined and based on multiple indicators, including, but not limited to least one indicator of school quality or student success and, at a State's discretion, an indicator of student growth (U.S. Department of Education, 2016, p. 86076). Section 200.14 (d) was

> revised to clarify that States must demonstrate that measures in the Academic Progress and School Quality or Student Success indicators are supported by research that high performance or improvement on such measures is likely to increase student learning (e.g., grade point average, credit accumulation, or performance in advanced coursework), or—for measures at the high school level—graduation rates, postsecondary enrollment, postsecondary persistence or completion, or career readiness. (p. 86077).

States are given the flexibility to choose at least one nonacademic indicator to meet the provision of the law. These indicators may be student engagement, school climate and

safety, attendance, and postsecondary readiness. ESSA's non test component of school quality or student academic success is one focal point of the policy, shifting the attention exclusively from student performance on standardized tests to include the impact teachers, school leaders, and individual schools have on student achievement (R. Skinner & Kuenzi, 2015; Weiss & McGuinn, 2016). Proponents of ESSA believe that schools will benefit from nonacademic measures. However, the implementation of untested policy is considered dangerous

> if states select indicators that can't be accurately measured or influenced by schools, or if they fail to provide schools with the resources they need to carry out new mandates, the indicator requirement could lead to unintended consequences or pushback from educators. (Blad, 2016, p. 15)

As states move forward with the identification of nonacademic measures, and the development and implementation of their accountability plans, they must effectively support their reasoning with "evidenced-based initiatives as depicted by the law" (Zinskie & Rea, 2016, p. 2). Therefore, it is important for states to choose a nonacademic measure that is supported and aligned to student performance.

A promising concept prominent in the literature is the notion of student engagement in the learning process (Seo, Brownell, Bishop, & Dingle, 2008, p. 98). Based on the extant literature, this construct promotes learning and achievement among students of all ages and abilities (Fredricks, Blumenfield, & Paris, 2004; G. W. Ladd & Dinella, 2009). Student engagement is perceived as a precursor to academic performance directly linked to student achievement and behavior that seeps into all aspects of student life (Christenson, Reschly, & Wylie, 2012; Harbour, Evanovich, Sweigart, & Hughes,

2015). However, specific challenges present themselves as obstacles to acquiring student engagement in classrooms across the nation.

Numerous forces create a learning revolution, such as (a) urgency, (b) knowledge, (c) capacity, and (d) competitiveness, which are evolving due to the fast-paced, multimedia cosmopolitan world that continues to compete with traditional schooling that has remained stagnant for over 50 years (Fullan & Quinn, 2016). Many educators and policy makers would agree that education is outdated, and this creates a push-pull dynamic. The push factor involves schools deemed boring by students. The pull factor is that the digital world and ever-changing innovations are accessible outside of the school walls, creating a disconnect from the classroom to real-world experiences. Engaging students in the learning process is not an easy feat and one that has challenged educators for decades, specifically in twenty-first-century classrooms where traditional schooling is not considered interesting and schools are perceived as "boring" (Fullan & Quinn, 2016, p. 77). The overwhelming abundance of digital and entertainment distractions accessible to students of all ages makes student engagement an even more daunting task for teachers.

An empirically confirmed way to foster student engagement is through high-quality instruction. Regarding this point, Harbour et al. (2015) stated, "As the agents of instruction, teachers and what they do are critical to increasing student engagement" (p. 6). Acknowledging teachers as critical agents in determining students' academic success and supporting the research that affirms the teacher is the most influential school-based force in student achievement (Stronge, 2018). Despite the promises made by policymakers to increase academic achievement through numerous reforms, nothing has

proven more important to improving student achievement than the teaching that occurs in classrooms across America (Stronge, Ward, & Grant, 2011). Thus, if states implement student engagement as a nonacademic measure on school quality, a clear definition and understanding of student engagement is essential. The concept of student engagement is based on the constructivist assumption that learning is influenced by how an individual participates in educationally purposeful activities (Coates, 2005).

Throughout recent years, the Miami-Dade County Public Schools (MDCPS) have tailored their policies and practices towards providing all schools with a unified approach to delivering quality classroom instruction which, at the same time, can be precisely measured to ascertain student engagement, teacher performance, and improvement opportunities districtwide. MDCPS employs a research-based Framework for Effective Instruction (FEI), which provides indicators that define effective instruction among key instructional domains. The framework contains six domains: (a) instructional delivery, (b) engagement, (c) instructional planning, (d) knowledge of learners, (e) learning environment, and (f) assessment. The framework provides a common language of quality instruction for administrators and educators, which ensures proper expectations and accountability. The FEI model was developed to align indicators to the effective delivery of instruction. In addition, MDCPS has established instructional pacing guides that provide specific guidance of standards, objectives, activities, resources, and a suggested instructional timeframe to ensure alignment among all schools. In an added effort to support alignment across schools, the district has adopted district-wide textbooks.

Regardless of these focused initiatives to improve student engagement, discrepancies within student proficiency and learning gains continue through the district.

Several factors can impact the levels of student engagement and use of instructional strategies in classrooms, including teachers' preparation, pedagogical experiences, and classroom management techniques. Accordingly, opportunities exist for the effective implementation of instructional strategies to increase student engagement within MDCPS. Given these factors, this study sought to determine levels of student engagement based on instructional delivery patterns in fourth- and fifth-grade classrooms within four district schools. In addition, the study was designed to inform instructional leaders on the relationship that exists between high yield instructional strategies and levels of student engagement intended to optimize student achievement.

Conceptual Framework

This research study centers around Stronge's (2018) Framework for Effective Teaching and outlines the relationship between high levels of student engagement and instructional practices in the classroom. The review of literature supports the conceptual framework of this research study and the relationship between the levels of student engagement and teacher's instructional practices. Effective implementation of high quality and research-based instructional practices have demonstrated to make a significant difference in student learning. According to Stronge (2018), teachers are an extremely influential factor in student achievement. The Framework for Effective Teaching provides indicators that define effective instruction among a variety of areas. The framework consists of six dimensions of teacher effectiveness: (a) professional knowledge, (b) instructional planning, (c) instructional delivery, (d) assessment, (e) learning environment, and (f) professionalism. This framework serves as a tool that guides teachers and administrators to create the most constructive learning experiences

for students. MDCPS has adopted a modified version of this framework as an instructional blueprint for evaluating teaching and learning within the district using MDCPS Instructional Framework Performance Evaluation and Growth Systems (IPEGS).

Effective teachers have been identified as those who maintain high levels of students engaged in a lesson (Stronge, 2018). For over two decades, educational and psychological researchers have attempted to define student engagement. Current literature has various definitions and conceptions of the meaning and functions of student engagement (Christenson et al., 2012). Empirical studies describe and agree that student engagement is multidimensional and multifaceted (Fredricks et al., 2004; Furlong & Christenson, 2008). Various definitions of engagement have flourished over the years depending on the researcher, theme of the researcher's study, and the study's conceptualization or perception on engagement, "yet, agreement on multidimensionality differs from agreement on the number and types of engagement dimensions, which ranged from two to four" (Appleton, Christenson, & Furlong, 2008, p. 370). Nonetheless, three components of student engagement are most frequently mentioned in research: cognitive, behavioral, and emotional.

Cognitive engagement. Cognitive engagement "incorporates thoughtfulness and willingness to exert the effort necessary to comprehend complex ideas and master difficult skills" (Fredricks et al., 2004, p. 60). It involves students' beliefs about themselves and others, for example, self-efficacy, motivation, and educational aspirations (Estell & Perdue, 2013). Students demonstrate cognitive engagement when they use self-regulatory strategies to monitor their learning, such as the self-regulated learning,

metacognition, and application of learning strategies. The cognitive element of student engagement includes students' understanding of what they are doing and its importance (Klem & Connell, 2004). According to Lawson and Lawson (2013) a study that examined students' cognitive engagement while participating in learning tasks suggested that students with high levels of cognitive engagement take a serious approach toward learning that extends beyond a desire to understand the content and earn good grades.

Behavioral engagement. Behavioral engagement entails involvement in academic or social extracurricular activities, in or out of the classroom (Estell & Perdue, 2013; Fredricks et al., 2004; Strambler & McKown, 2013). G. W. Ladd and Dinella's (2009) study demonstrated that behavioral engagement is a strong predictor of a student's academic progress and growth. Behavioral engagement has various definitions throughout the literature (e.g., effort, attention, and persistence; E. A. Skinner & Belmont, 1993) and aligns with the idea of participation in school and learning activities (Finn, 1993). It involves students' time on task, participation in academic and social events, concentration with academic tasks related to persistence and effort (Duckworth, 2016; Jefferson-Williams, 2014). Behavioral engagement is defined as the student's active participation in class or extracurricular activities (Furlong & Christenson, 2008; Strambler & McKown, 2013). Student learning takes place when students are engaged: "If students are not engaged, there is little, if any, chance that they will learn what is being addressed in class" (Marzano, Pickering, & Heflebower, 2011, p. 1), supporting the idea that teachers must plan lessons that will involve students.

Emotional engagement. Emotional engagement refers to how students feel about school in general: the relationships established with their teachers and peers, their ability

to do schoolwork, and overall sentiment about the school environment (Fredricks et al., 2004). A component of emotional engagement is "connectedness and identification with the school" (Harbour et al., 2015, p. 5). "The way students feel that they value and belong in school" is described as a sense of belongingness (G. W. Ladd & Dinella, 2009, p. 2). Emotional engagement entails a student's level of enthusiasm, confidence, and interest when an academic task is completed (Klem & Connell, 2004). It centers around students' feelings towards their school, teachers, classmates, and classroom (Estell & Perdue, 2013). Students develop a positive academic attitude and value towards schools where they have supportive and caring friends. Research findings indicate that students are not on "automatic pilot" at school; rather, their feelings and emotional well-being are important (Lawson & Lawson, 2013). These feelings are pivotal and influential in the formation of students' motivation to achieve an academic task (Lawson & Lawson, 2013). Students who are attached to individuals at the school strive to pursue and complete academic tasks more than those who lack school attachment. Nonetheless, it is important for these three forms of engagement—cognitive, behavioral, and emotional—to work in concert with one another to set the path for students' academic success (Archambault & Dupéré, 2017).

Regardless of which definition of student engagement is applied or studied, the overall paradigm of student engagement reveals that it plays a positive and significant role in student achievement: "These studies indicate the vital importance of student engagement not only for current academic success but also for future success" (Harbour et al., 2015, p. 6). Klem and Connell's (2004) study exemplified the substantial role that teacher support plays in student engagement and academic success. Therefore, teachers,

as instructional agents, and the practices they employ in their classrooms are critical in fostering and increasing student engagement.

Purpose of Study

Student engagement is an essential component to student learning. According to Marzano et al. (2011), students must be engaged to learn what is being instructed. Teacher behavior is a critical factor in increasing student engagement and academic achievement (Harbour et al., 2015). Nevertheless, an ongoing debate continues to occur in American education as researchers and educators, alike, attempt to determine the most effective instructional practices in developing student engagement and achievement (Davis, 2010). Student engagement in a classroom ensures that the students are more connected to the learning process and to the lesson being presented by the teacher (Davis, 2010).

As previously mentioned, MDCPS has focused both policy and practices on providing schools with a unified approach to delivering quality classroom instruction. The FEI was adopted to provide indicators aligned with effective instruction. This research-based framework was developed to offer administrators and educators a common language to guarantee that all students district wide are exposed to the same sound curriculum and quality instruction. In addition, MDCPS has established resources to ensure that there is an alignment amongst all schools within the district. Despite the alignment and commonalities present, underlying issues still need further investigation. Discrepancies within student proficiency and learning gains exist across schools throughout the district.

Related to this concern, the major purpose of the study is to investigate what patterns exist among fourth- and fifth-grade teachers across four schools within the district concerning the use of instructional practices and how these instructional practices relate to levels of student engagement. This research may strengthen the importance of IPEGS Performance Standard 4: Instructional Delivery and Engagement substantiating its impact on student achievement (Stronge, 2018). This study will potentially reveal if the current indicators for Instructional Delivery and Engagement within the IPEGS teacher evaluation system are aligned and with the levels of student engagement observed.

Research Questions

This study addressed the following research questions:

1. To what degree and in what ways are the indicators of the MDCPS IPEGS, Instructional Delivery standards implemented in the selected fourth- and fifth-grade classrooms across four selected district schools?
    a. What are the frequencies and types of instructional strategies employed in the selected fourth- and fifth-grade classrooms across four selected district schools?
2. To what degree and in what ways are the indicators of the MDCPS IPEGS Student Engagement standards implemented in selected fourth and fifth-grade classrooms across four selected district schools?
    a. What levels of student engagement exist in selected fourth- and fifth-grade classrooms across four selected district schools?

3. What patterns emerge related to the use of instructional strategies and associated student engagement in selected fourth- and fifth-grade classrooms across four selected district schools?

Significance of the Study

This cross-case analysis study will shed light on the relationship between high levels of student engagement and the instructional practices in the classroom. The collection of these data will be valuable to the MDCPS district, especially if the state of Florida adopts the criteria of student engagement as the nonacademic measurement to comply with the current ESSA requirements. Additionally, the collected data will be valuable to educators in the district, as it will provide easy access to information regarding patterns of use of instructional strategies that yield high levels of engagement in elementary school classrooms. Therefore, the study will lead to more insight regarding the use of these instructional practices within the district via the instructional pacing guides and help drive the professional development offered to teachers.

There is a need to explore differences or similarities between the instructional practices and student engagement across four schools. The outcome of the study will yield insights for district and school site administrators and teachers to determine which instructional practices elicit the highest levels of student engagement. More specifically, the study will illuminate the relationship that may exist between IPEGS Standard Performance 4, Instructional Delivery and Engagement, aligned with the levels of student engagement observed in the various classrooms. Furthermore, the study will inform administrators, faculty, and staff about what instructional strategies are associated with higher levels of student engagement. Findings could be used by the district to inform and

make decisions regarding effective classroom instructional practices that could improve student engagement and, consequently, student academic success.

Definition of Terms

Cognitive activity is a conscious mental activity that includes remembering, understanding, applying, analyzing, evaluating and creating (Cassady et al., 2004).

The Differentiated Classroom Observation Scale is an observational scaled developed to observe the educational experiences of a group of students (Cassady et al., 2004).

The *Every Student Succeeds Act* replaced the NCLB as of December 10, 2015. ESSA's primary objective is to ensure the opportunity for every student to do well in school. The initial effect of the ESSA began for all schools in the academic year 2016–2017. ESSA has eight titles, each addressing an essential part of the new law.

The *Framework of Effective Instruction* provides indicators that define effective instruction among six domains: (a) instructional delivery, (b) engagement, (c) instructional planning, (c) knowledge of learners, (d) learning environment, and (e) assessment.

Holistic rating is a method of evaluating elements of an observation based on its overall quality using a scale.

Instructional activities are teaching strategies that a teacher implements during instructional time (Appendix A).

Instructional delivery is the action the teacher does in the classroom that promotes learning by demonstrating accurate content knowledge and by addressing academic needs

through a variety of appropriate instructional strategies and technologies that engage learners.

The *Instructional Performance Evaluation and Growth System* is the assessment and appraisal system used by all instructional professionals in MDCPS. IPEGS was developed in collaboration with United Teachers of Dade and has been in place since the initial pilot in 2006.

Instructional strategies are techniques or methods that a teacher can implement to meet the various learning objectives.

The *Learning director* is the individual who directs the learning or makes the decision about the learning activity, teacher.

Student achievement is the amount of knowledge students are expected to have at a certain point in time, such as in each grade level of school.

Student engagement is a combination of students' ongoing feelings, thoughts, and experiences tied directly to the school day and behaviors such as responsibility, initiative, concentration, and time on tasks specific to the lesson activities.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Student engagement has been a constant concern and focus of debate for schools across the United States for many decades (Harbour et al., 2015). Many believe that student engagement is a valuable variable in the formula for academic success (Fredricks et al., 2004; Furlong & Christenson, 2008; Harbour et al., 2015). The purpose of this literature review is to explore the concepts of student engagement and the instructional practices and patterns that exist among elementary schools. Additionally, some instructional strategies have a positive impact on students' academic performance and generate higher levels of engagement in the classroom, such as feedback, questioning, and modeling (Hattie, 2009; Kern & Clemens, 2007; Stronge, 2018).

Figure 1 delineates the major themes of this research review. The research targets one conceptual framework for effective instruction, MDCPS Framework for Effective Instruction, student engagement, and instructional practices. This conceptual framework of effective instruction focuses on widely used frameworks such as Hattie's Research, Charlotte Danielson's Framework for Teaching, Marzano's Model Framework and Stronge's Qualities of Effective Teachers. Furthermore, the research elaborated on specific indicators of the MDCPS Framework for Effective Instruction and the evaluative system used in MDCPS school district. The research will explore the historical importance and forms of student engagement. Instructional Practices will highlight

effective research-based strategies such as modeling, opportunities to respond (OTR), feedback and time on task and its relationship to student engagement.

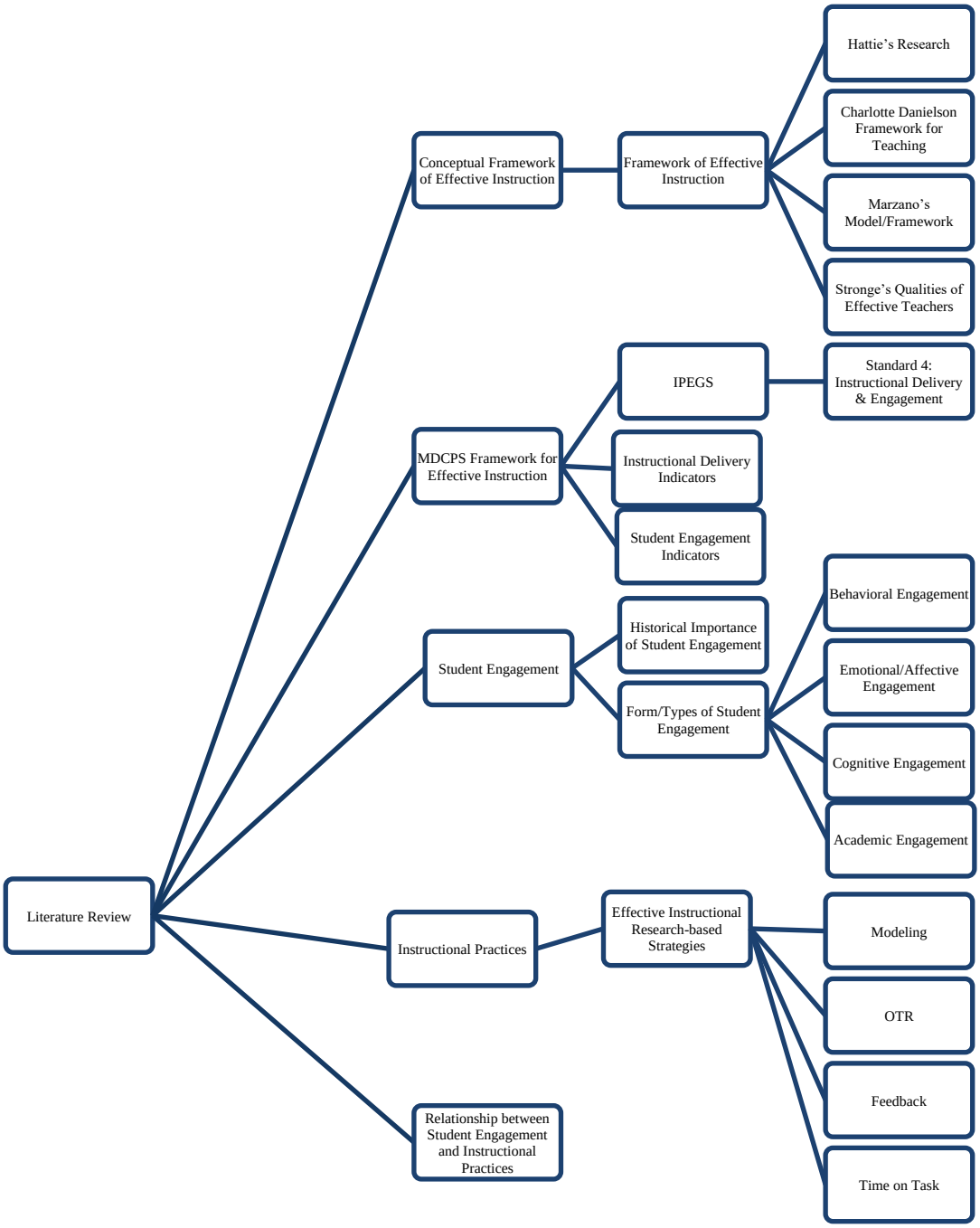

Figure 1. Literature review outline. IPEGS = Instructional Performance Evaluation and Growth System; MDCPS = Miami Dade County Public Schools; OTR = Opportunity to Response.

Conceptual Frameworks for Effective Instruction

School districts throughout the United States focus on providing educational opportunities that enable all students to achieve their fullest potential. The success level that each student experiences in American schools is contingent upon the skills and professional capabilities of the teachers they encounter through their schooling years. Effective teachers make teaching and learning visible in the classroom. Students in effective teachers' classrooms are actively involved in the learning process: "It is what teachers get the students to do in the class that emerged as the strongest component of the accomplished teacher's repertoire, rather than what the teacher, specifically does" (Hattie, 2009, p. 35). Research consistently highlights that one critical school improvement factor is effective instruction (Hattie, 2009; Stronge, 2018). Additionally, no single school-related variable has more impact on student achievement than teaching.

The complexity of teaching has influenced the development of effective instructional frameworks. Frameworks communicate school districts' beliefs on effective teaching. A framework offers teachers a structure to organize their practices and improve their efforts. These structures provide a commitment to the growth and professional development of their teachers and administrators. Instructional frameworks are a synthesis of teaching behaviors that promote student learning at high levels, support teachers and administrators, and are developed based on extensive research and learning theories. The framework offers a road map for novice teachers, guidance for the experienced educator, and structure to improve instruction. The act of teaching and what

a teacher does in the classroom are pivotal in the development of an instructional framework.

Effective instructional frameworks offer all teachers an explicit instructional roadmap of inquiry-based instructional practices, strategies, and models, resulting in academic achievement. These frameworks are research-based planning tools that promote and sustain a common professional language among educators with clearly defined goals and expectations and common outcomes for students. Instructional frameworks are coherent belief systems that foster commitment and accountability to student learning. Among the most commonly used frameworks in schools throughout the United States that focus on improving the quality of education are Danielson's Framework for Teaching, Marzano's "The Art and Science of Teaching" framework, and Stronge's Framework for Effective Teaching: Qualities of Effective Teachers. While not always considered an explicit instructional framework, Hattie's visible learning research is influential as a way to think about what is effective teaching. This section begins with a review of Hattie's visible learning research.

Hattie's Visible Learning Research

Hattie (2009) synthesized over 800 meta-analyses, which encompassed 52,637 studies and provided over 100,000 effect sizes about the influence of program, policy, or innovations on student achievement. According to Hattie (2009) an effect size of .40 is considered average; setting the bar lower than .40 is setting low expectations for learning. Programs, policies, or initiatives with effect sizes of .40 or higher are labeled "zone of desired effect" (Hattie, 2009, p. 19). There are various noteworthy effect sizes from

Hattie's (2009) research based on teacher contributions and the quality of teaching as perceived by the learner.

Pressley, Gaskins, Solic, and Collins (2006) demonstrate the power of teaching various learning strategies in a case study of a benchmark school. Pressley et al. (2006) attribute the benchmark school's success to the development of procedural knowledge in students, the awareness of declarative knowledge, the application of metacognition, and motivation. The school focused on student engagement during the learning process and teachers articulating instructional practices. Hattie (2009) stated,

> The key ingredients of what it means to be strategic in teaching and learning relates to teachers finding ways to engage and motivate students, teach appropriate strategies in the context of various curricula domains, and constantly seeking feedback about how effective their teaching is being with all students. (p. 161)

This case study highlights the importance of teachers setting challenging goals, reflecting on their progress towards attaining their goals, providing meaningful feedback, teaching appropriate learning strategies, and motivating students.

A meta-analysis summary of the contributions from teaching approaches correlates to the benchmark school's success. Setting learning intentions or instructional goals has an effect size of .56: "It is not the specificity of the goals but the difficulty that is crucial to success. There is a direct linear relationship between the degree of goals difficulty and performance" (Hattie, 2009, p. 164). Multiple research on the relationship between goal difficulty and performance has been completed, all ranging with effect sizes of .52 to .90 (Hattie, 2009). Duckworth and Yeager (2015) stated the importance of

providing students with opportunities to develop noncognitive skills, such as goal setting, grit, and growth mind-set, to help build motivation and academic success. Rowe, Mazzotti, Ingram, and Lee (2017) offered evidence to support previous research that goal-setting instruction is effective in improving academic performance of students.

Meta-cognition plays a vital role in student motivation and engagement in lessons: “Researchers in cognitive psychology have linked metacognition to a number of other constructs, including meta-memory, critical thinking, and motivation” (Lai, 2011, p. 10). Metacognition is defined as “thinking about thinking” (Hattie, 2009; Lai, 2011). It entails planning on how to attempt a learning task, evaluating the progress, and monitoring comprehension. Various meta-analysis have highlighted the significance of applying metacognitive strategies while learning. Hattie (2009) examined meta-cognitive strategies and assigned it a .69 effectiveness toward improving academic achievement. Haller, Child, and Walberg (1988) performed a meta-analysis on 20 empirical studies that focused on metacognitive strategies during reading instruction. These researchers reported a .71 effect size on the influence of these strategies on reading instruction. Dignath, Büttner, and Langfeldt (2008) conducted a meta-analysis on over 40 studies investigating the effect of self-regulation on learning and the use of strategies among elementary students. The effect sizes ranged from .54 to 1.50 (Dignath et al., 2008). The most effective strategies noted were training in planning and monitoring, text inconsistency or dissonance approach, problem solving, and self-questioning (Dignath et al., 2008; Haller et al., 1988; Hattie, 2009; Lai, 2011).

Feedback is a powerful influence on achievement. Feedback is ranked 10th and has an effect size of 0.73 (Hattie, 2009). Hattie and Timperley (2007) define feedback as

"information provided by an agent regarding aspects of one's performance or understanding" (p. 81). Feedback may be provided in diverse formats. According to Hattie and Timperley (2007), "feedback is information with which a learner can confirm, add to, overwrite, turn or restructure information in memory, whether that information is domain knowledge, meta-cognitive knowledge beliefs about self and tasks, or cognitive tactics and strategies" (p. 5740). Hattie and Timperley (2007) highlight and summarize the effect sizes from 12 meta-analyses that assessed the influence of feedback. The average effect size of these noted meta-analyses was .79, demonstrating how powerful feedback is. Furthermore, Hattie and Timperley (2007) presented a framework for feedback based on three major questions: (a) What are the goals? (b) what progress is being made towards the goal? and, (c) what activities need to be adopted to make progress? Each of these levels generate a different form of feedback.

Formative assessment is a form of feedback that focuses on the teachers' progress towards attaining the learning intentions (Hattie, 2009). In a study conducted by Fuchs and Fuchs (1986), the effects of formative assessment conducted by teachers generated a significant increase of achievement in students with mild disabilities. When teachers were required to use and graph data, effect sizes were much higher: "The major message is for teachers to pay attention to their formative effects of their teaching; it is these attributes of seeking formative evaluation of the effects of their programs that makes for excellence in teaching" (Hattie, 2009, p. 181). Formative assessments guides reflect on teachers' instructional practices.

A learner's motivation for learning is generally linked as one of the most critical factors of the success and quality of learning outcomes (Broussard & Garrison, 2004).

Motivation needs to relate to the learning goal, personal striving of the learner, and the demands of the tasks. Dornyei (2001), as cited in Hattie (2009), "noted that motivation is highest when students are competent, have sufficient autonomy, set worthwhile goals, get feedback, and are affirmed by others" (p. 48). Broussard and Garrison (2004) concluded that positive relationships exist between motivation and achievement in young children. Mastery motivation is a better predictor of academic achievement in young elementary school-aged children (Broussard & Garrison, 2004). According to Hattie (2009), motivation has an effect size of .48, demonstrating the importance of turning students on to learning.

Research highlights a magnitude of elements that are critical to student learning; nonetheless, all elements are aligned to teacher effectiveness: "It is visible teaching and learning by teachers and students that makes the difference" (Hattie, 2009, p. 22). Teachers contribute to student learning through the quality of their instructional delivery, expectations, and conceptions on teaching, learning, curriculum, and assessment. Teachers set the tone for learning through their classroom climate. Effective teachers foster engagement of all students. How teachers involve their students in learning makes a positive impact; their influence on student achievement makes a difference.

Charlotte Danielson's Framework for Teaching

Effective instructional frameworks are based on research centered around teachers and teaching practices. The Framework for Teaching (FFT) developed by Charlotte Danielson was developed with the purpose of promoting clear and purposeful conversations about effective teaching practices (Danielson, 2017). The Charlotte Danielson's Framework is widely used throughout the United States as a means of

evaluating teachers and providing targeted professional development. The FFT consists of research-based instructional components that align to the Interstate New Teacher Assessment and Support Consortium (INTASC) standards. This framework is grounded in a constructivist view of learning and teaching (Danielson, 2017). The FFT has 22 components clustered into four domains of teaching responsibility, (a) planning and preparation, (b) classroom environment, (c) instruction and (d) professional responsibilities (Danielson, 2017). The planning and preparation domain entails how the teacher designs and organizes for instruction, including demonstrating knowledge of content, pedagogy, students, and resources. The second domain, classroom environment, consists of the non-instructional interaction that occurs in a classroom, such as respect among teachers and students, classroom culture, and behavioral management. Furthermore, the third domain involves the core of teaching and the engagement of learners. This domain involves teachers and students in questioning, deliberating, and providing feedback. Professional responsibility, the fourth domain, consists of various teachers' responsibilities outside of the classroom, such as reflecting, record keeping, and growing professionally. This framework offers the teaching profession a common language, provides a pathway for beginning teachers, provides guidance of seasoned educators, and communicates the competencies of effective teachers (Danielson, 2017).

Throughout the years, several studies have been conducted involving FFT. According to Kettler and Reddy (2019), the FFT has produced evidence of scores from which conclusions can be made about teacher practices. Kane, Taylor, Tyler, and Wooten (2011) conducted a study to estimate the relationship between classroom practices and student achievement gains using the data from FFT Domain 2—classroom

environment—and Domain 3—instruction. The results from the study indicated significant evidence that classroom observations can capture elements of teaching that are related to student achievement. The researchers also highlighted a correlation between FFT total scores and growth in reading and math achievement. In their two-year study, Sartain et al. (2011) emphasized that teachers who scored favorably on the FFT tend to have students who improve more in achievement. Kettler and Reddy (2019) studied the relationship between composite and transition scores to student growth in achievement. Results indicated that "composite scores from FFT clearly reflect teacher variables related to growth in reading and mathematics" (Kettler & Reddy, 2019, p. 79). These findings support the implementation of FFT in schools for a variety of purposes. The FFT is built on components that generate high effect size, such as setting expectations for learning and achievement, noting the quality of questioning, monitoring student learning, providing feedback to students, engaging students in self-assessment, and monitoring and adjusting lessons (Hattie, 2009).

Marzano's "The Art and Science of Teaching" Framework

Another widely used instructional framework throughout the country is Marzano's "The Art and Science Teaching" framework. This framework is centered around items based on previous work associated with teaching areas and behaviors (Learning Sciences International, 2013). This model "can be considered an aggregation of the research on those elements that have traditionally been shown to correlate with student academic achievement" (Learning Sciences International, 2013, p. 3). Numerous studies have demonstrated positive correlations between the implementation of the model with teachers and student achievement (Haystead, 2010; Marzano & Haystead, 2010).

"The Art and Science of Teaching" framework consists of four domains that target different areas of teaching performance: (a) classroom strategies and behaviors, (b) planning and preparing, (c) reflecting on teaching, and (d) collegiality and professionalism. According to Marzano (2017) the first domain focuses on pedagogical strategies and identifies 41 instructional categories that happen in the classroom. These 41 instructional categories are organized into nine design questions (DQ) and further grouped into three overarching lesson categories: (a) routine segments, (b) content segments, and (c) on-the-spot segments (Marzano, 2017). These categories originate from the perspective of the teacher's role. "Classrooms engage in routine segments on a systematic basis, content segments address content lessons, and on-the-spot segments address strategies that teachers use when unplanned, immediate situations occur" (Marzano, 2017, p. 6). The second domain centers around planning and preparing for instruction. A better prepared teacher makes effective instructional choices (Learning Sciences International, 2013). Domain 3, reflecting on teaching, addresses deliberate practice: "It encourages teacher self-reflection in the areas of evaluating personal performance and developing and implementing a progress growth plan" (Learning Sciences International, 2013, p. 16). The fourth domain, collegiality and professionalism, fosters a supportive and collaborative culture: "This domain supports teacher participation in lesson study, instructional rounds, teacher-led professional development, and professional learning communities in which teachers collaboratively examine evidence of student learning and the impact that specific instructional strategies" (Learning Sciences International, 2013, p. 16). These four domains offer educators a

pathway to improve their teaching practices, resulting in an increase in student achievement.

Numerous studies on the effectiveness of Marzano's "The Art and Science of Teaching" framework have been conducted throughout the years. A study performed in the state of Oklahoma focused on the relationship between the elements of Domain 1 and student achievement (Marzano Research Laboratory, 2011). The study found a positive correlation between the instructional categories of this domain and mathematics and reading state assessment with a .87 effect size (Marzano Research Laboratory, 2011). Furthermore, Pinellas County Public Schools and Learning Sciences International worked collaboratively on a research project to increase student achievement by improving teacher pedagogy through the elements of Marzano's framework (Marzano Research Laboratory, 2011). The study revealed small to moderate correlations between the average observation scores of Marzano's framework and the Florida value-added teacher's measure. These results support the validity and reliability of using the model to determine teacher effectiveness. Additionally, this study found that student achievement significantly improved when the framework was paired with leadership coaching and implemented with fidelity (Marzano Research Laboratory, 2011). In conclusion, a plethora of research, experimental/control studies, correlation studies, teacher-designed studies, schoolwide studies, and technology studies support the correlation that exists between the instructional categories of Marzano's framework and an increase in student proficiency. These correlations may be attributed to research-based practices such as communicating learning goals, tracking student progress, celebrating success, reflecting

on learning, integrating complex tasks, and engaging students that have repeatedly demonstrated as being part of an effective teacher's repertoire.

Stronge's Framework for Effective Teaching: Qualities of Effective Teachers

Another common framework for instruction implemented throughout the country is Stronge's Framework for Effective Teaching: Qualities of Effective Teachers. Stronge's Framework centers on the teacher: "The focus is on the whole person who brings to the classroom unique beliefs, values, attitudes, aspirations, motivation, knowledge and skills" (Stronge, 2018, p. 3). This framework does not perceive teaching skills in isolation. It is based on solid and current empirical findings. Stronge (2018) highlights common characteristics possessed by effective teachers. Effective teachers "directly affect how students learn, what they learn, how much they learn, and the ways in which they interact with one another and the world around them" (Stronge, 2018, p. 3). This framework focuses on the positive influence teachers have on the lives of their students—academically, emotionally, and cognitively.

Unlike the Framework for Teaching by Danielson and Marzano's "The Arts and Science of Teaching" framework, Stronge's (2002, 2018) model is comprised of six performance standards that define the major duties performed by educators. According to Stronge (2018), these performance standards "aim to provide a comprehensive and authentic 'performance portrait' of effective teachers" (p. 11). These standards are based on solid research that highlight teacher behaviors that impact student achievement. As stated by Williams (2010), school site administrators and teachers believe that Stronge's framework includes qualities possessed by competent teachers. Stronge's framework is

composed of professional knowledge, instructional planning, instructional delivery, assessment, learning environment, and professionalism.

Professional knowledge is the foundation for effective instruction. According to Stronge (2018), professional knowledge is critical for effective instruction; it entails knowledge on the subject matter, pedagogical, curricular and the community and cultures of the students. Professional knowledge also refers to the teacher's verbal ability, preparation and certification, and experience. Instructional planning entails the elements of planning, organizing, and adapting for instruction: "Instructional planning refers to the process a teacher engages in while planning and structuring learning activities to meet the needs of all students using state's standards, the school's curriculum, data and engaging and appropriate strategies and resources" (Stronge, 2018, p. 54). This standard addresses three essential questions: (a) What should be taught? (b) how should it be taught? and, (c) how do we know if students learn what we taught? Instructional planning focuses on optimizing instructional time, developing learning objectives, and using student data to make instructional decisions. Instructional delivery refers to the plethora of research-based instructional strategies a teacher employs during instruction. This standard involves a teacher using a variety of instructional strategies, differentiating instruction, setting high expectations, promoting high order thinking, using high-quality questions, and supporting active learning through student engagement (Stronge, 2018). Assessment is the performance standard that focuses on the use of student data. Assessment addresses how teachers design assessments, use the data, encourage student self-assessment, provide timely and meaningful feedback, and assign home learning. Learning environment targets the teacher's abilities to provide a positive, supportive, and safe

learning environment for students, which includes classroom management and organization. Per Stronge (2018), “professionalism encompasses key characteristics reflecting a teacher’s disposition, goals and purposes, and values and beliefs that directly affect teaching effectiveness” (p. 213). The professionalism standard embodies emotional, personal, and professional characteristics shared by competent teachers.

This framework involves factors that have been repeatedly associated with an increase in student achievement. As mentioned by Grant, Stronge, and Xu (2013), instructional planning, instructional delivery, and assessment are three instructional practices that have been found to predict student achievement: “Teachers’ instructional planning influences the content of instruction, the sequence and cognitive demands of the subject topics, learning activities and students’ opportunities to learn, and the pacing and allocation of instructional time” (p. 7). Instructional planning is the driving force in a practical lesson. A study conducted by Haynie (2006) in Wake County Public Schools, North Carolina, revealed differences between top-performing teachers and bottom-performing teachers as identified by residual gain scores on standardized testing results. Highly effective teachers collaborated with one another rather than solely depending on district pacing guides. They were resourceful and planned their activities using student data. On the other hand, low-performing teachers planned alone and only used the available resources. Allington and Johnston (2000) also highlighted the importance of instructional planning in a study conducted in 24 schools in five states: California, New Hampshire, New Jersey, New York, and Texas. The study revealed that exemplary teachers capitalize on teachable moments. In their planning, these effective teachers seemed to be more interested in learner’s engagement. They were aware of their students’

interests, needs, strengths, and weaknesses. Research has highlighted how instructional planning is a noted teacher quality of effective teachers (Allington & Johnston, 2000; Haynie, 2006; Stronge, 2018).

Stronge, Ward, Tucker, and Hindman (2007) found that teaching practices are a critical factor in student achievement. Researchers suggest that "teachers with the same background qualifications and same schooling resources do different things in their classrooms and, consequently, enable their students to achieve at different levels" (Grant et al., 2013, p. 8). Therefore, it is imperative to observe teachers in action in their classrooms to identify how they translate their subject and pedagogical knowledge into practice. Cohen, Raudenbush, and Ball (2003) summarize that instruction influences student learning. Instruction consists of interactions among teachers, students, and content (Cohen et al., 2003). Palardy and Rumberger (2008) noted that educational policy must be directed toward improving aspects of teaching such as instructional practices. Instructional practice is a significant aspect of teacher effectiveness. Furthermore, as mentioned previously, Hattie (2009) suggested that student achievement is highly correlated to instructional quality. A study proved that "teachers' practices inside the classrooms have not only statistical but also practical significance in terms of student learning" (Grant et al., 2013, p. 8). Therefore, implementing instructional practices with significant effect sizes play a critical role in student achievement.

Student achievement is the goal of all educators; however, to ensure that every student is learning to his or her fullest potential, they must employ tools to monitor student progress and identify their needs. According to Hattie (2009), effective teachers monitor student progress, assess their learning, and provide relevant and meaningful

feedback. Wenglinsky (2002) revealed the importance of implementing ongoing assessment to monitor student progress. The use of frequent tests and constructive feedback had a positive effect on student learning (Wenglinsky, 2002). Stronge et al. (2007) also compared the practices of student assessment between effective and ineffective teachers. Effective teachers individualized and differentiated instruction and assignments for students using student data. Hence, "student progress monitoring is a practice that helps teachers use student performance data to continually evaluate the effectiveness of their teaching and make more informed instructional decisions" (Safer & Fleischman, 2005, p. 81). Teachers who monitor their student progress demonstrate a more significant concern for student learning and teaching practices. These teachers use the data to make instructional decisions, such as tailoring instruction to address students' weaknesses, implementing effective strategies, and making modifications to assigned tasks. A study using curriculum-based measurement to monitor student progress to make instructional decisions indicated that teachers' use of curriculum-based measurement produced significant gains in student achievement (Stecker, Fuchs, & Fuchs, 2005). These gains in student achievement were associated with teachers' use of systematic data, skills analysis feedback, and instructional modifications (Stecker et al., 2005). Grant et al. (2013) highlighted the following as student assessment practices of effective teachers: (a) administer frequent assessments, (b) provide constructive feedback, (c) inform instructional decision making, (d) reflect on data-based decisions for instruction modifications, (e) differentiate assignments, and (f) assess instructional effectiveness. The definition of an effective teacher is complex; nonetheless, Stronge's (2018)

framework embodies a multitude of qualities that connect teacher effectiveness and student achievement.

M-DCPS Framework for Effective Instruction

MDCPS is a prime example of a school district committed to improving delivery and instruction that leads to higher levels of student engagement. Throughout recent years, MDCPS has tailored their policies and practices towards providing all schools with a uniform approach to deliver quality classroom instruction, which can be clearly measured to ascertain student engagement and teacher performance. The Framework for Effective Instruction (FEI) was developed to provide indicators that are aligned with effective instruction while offering administrators and educators alike with a common language to ensure that all students district wide are exposed to the same sound curriculum and quality instruction. MDCPS framework is closely aligned to IPEGS which was developed based on the Stronge's Qualities of Effective Teachers framework.

The MDCPS FEI identifies teaching practices that include effective instructional practices. The framework may be utilized for numerous purposes; however, its most significant value and impact is that it serves as the basis for feedback, leading to professional conversations among educators as they seek to enhance skills in the intricate task of teaching. The framework can also be utilized to focus a school's coaching, mentoring, professional development, and teacher evaluation systems, ultimately linking all those activities together and helping teachers become more reflective practitioners (MDCPS, 2015). MDCPS utilizes the research-based FEI, which provides indicators that define effective instruction among different domains. The FEI contains six domains: (a) knowledge of learners, (b) learning environment, (c) assessment, (d) instructional

planning, (e) engagement, and (f) instructional delivery. This tool provides a common language of quality instruction for administrators and educators, outlining proper expectations and accountability. The FEI outlines several indicators to be utilized as a blueprint for effective teaching.

Instructional Performance Evaluation and Growth System (IPEGS)

As part of its response to the accountability trend and subsequent legislation, MDCPS piloted the Instructional Performance Evaluation and Growth System in 2006, in an effort to identify a more appropriate teacher evaluation systems. IPEGS was developed in collaboration with United Teachers of Dade and derived from the Goals and Roles Assessment and Evaluation Model developed by Stronge (2006) based on over two decades of work with school systems. The Goals and Roles Model is based on the collection and presentation of data concerning document performance based on defined standards. The Goals and Roles Model offers a practical, contemporary, research-based model of personnel evaluation developed specifically to balance the unique role demands and professional growth needs of teachers. The basis of the Goals and Roles Model is grounded on the premises that employees deserve a system that encompasses well-defined job descriptions and expectations while promoting effective growth and development of individuals (Stronge, 2006). “In the past 12 years, due to numerous state laws and regulations e.g., Senate Bill (SB) 736-The Student Success Act) governing the evaluation criteria for teachers, IPEGS has undergone many modifications” (MDCPS, 2018, p. 6). These changes have increased accountability while promoting individual professional growth.

MDCPS supports teacher growth through specific and observable examples as listed in the Florida Educator Accomplished Practices included with IPEGS Standards 2-8. The Florida Educator Accomplished Practices are Florida's core standards for effective educators and provide valuable guidance to Florida's public-school educators (Florida Education Standards Commission, 2013). In addition, it guides educator preparation programs throughout the state on what educators are expected to know and can do. The Florida Educator Accomplished Practices were established in 1998 through State Board of Education Rule 6A-5.065, F.A.C. The Educator Accomplished Practices serve as the state's standards for effective instructional practice and form the foundation for the state's teacher preparation programs, educator certification requirements, and school district instructional personnel appraisal systems. The Educator Accomplished Practices are based upon three foundational principles. Those principles focus on high expectations, knowledge of subject matter, and the standards of the profession. Each effective educator applies the foundational principles through six Educator Accomplished Practices. Each of the practices is clearly defined to promote a common language and statewide understanding of the expectations for the quality of instruction and professional responsibility. Florida Educator Accomplished Practices are like the elements used in Marzano's teacher effectiveness evaluation model and the components used in Danielson's version of the same model.

The IPEGS instrument is utilized to evaluate instructional personnel annually and is comprised of performance standards by which instructional personnel are evaluated using numerous data sources rather than previous evaluation instruments that focused solely on observing student or teacher behavior (MDCPS, 2018). IPEGS is utilized to

measure teacher effectiveness through eight performance standards, unlike the four domains of Danielson and Marzano. The overall goal of IPEGS is to support continuous growth of instructional professionals by monitoring, analyzing, and applying pertinent data compiled within a system focused on meaningful feedback. The main purposes of IPEGS are to improve the quality of instruction by ensuring accountability for classroom/program performance; contribute to successful attainment of the goals and objectives defined in the vision, mission, and goals of MDCPS; provide a basis for instructional improvement through a productive instructional personnel evaluation and professional growth; and provide a collaborative process promoting self-growth, instructional effectiveness, and improvement of overall practice. IPEGS is designed to facilitate instructional personnel in identifying, designing, and reflecting upon their professional performance. MDCPS ensures that instructional personnel actively participate in the evaluation process through collaborative meetings, input, and reflection (MDCPS, 2018). IPEGS provides "balance between structure and flexibility" (MDCPS, 2018, p. 6). The goal of evaluation systems is to continue successful and effective job performance or to improve the performance of the less successful personnel; therefore, assessor–professional communication is vital and built into IPEGS. IPEGS is centered on the following eight performance standards for instructional personnel: (a) learner progress, (b) knowledge of learners, (c) instructional planning, (d) instructional delivery and engagement, (e) assessments, (f) communication, (g) professionalism, and (h) learning environment.

The analysis of the literature presented examines the idea of student engagement in schools. The robust literature focuses primarily on the connection among student

engagement, instructional practices, and academic success. It provides various definitions of engagement in a K-12 educational setting and offers explanations for practical implications. Growing research illustrates that teacher and student behaviors influence student engagement levels in schools, and researchers acknowledge that high levels of engagement have a significant impact on student learning and academic outcomes (Kuh, 2009).

Performance standard four, Instructional Delivery and Engagement, addresses the academic needs of students through the implementation of various instructional practices and technologies that engage the learners (MDCPS, 2018). Instructional delivery fosters student engagement through reinforcing learning goals, delivering explicit instruction, using multiple levels of questioning, and providing ongoing and useful feedback. Specifically, this performance standard reads, "The teacher promotes learning by demonstrating accurate content knowledge and by addressing academic needs through a variety of appropriate instructional strategies and technologies that engage learners" (MDCPS, 2018, p. 13). According to the MDCPS IPEGS manual (2018), there are various indicators associated with Performance Standard 4 that address teacher behaviors. Teachers must engage students in diverse activity structures: individual, collaborative, and whole group. The teacher should demonstrate current knowledge of content and standards and explains directions, concepts, and content in a logical and sequential manner. Using multiple levels of questions teachers can adjust lessons for reteaching, remediation, or enrichment. Lessons should connect learning goals to students' prior knowledge, life experiences, and interests therefore engaging students in authentic learning through real-life applications and interdisciplinary connections. Explicit

instruction, appropriate literacy strategies and high order thinking tasks are critical to student learning. Teachers should plan lessons that maximize instructional time with appropriate pacing to that reinforcing learning goals. Lessons must provide opportunities to individualize instruction and enhance learning through technology. Teachers must provide ongoing, timely, and specific feedback to students (MDCPS, 2018). The core of education is teaching and learning, and the teaching–learning connection works best when we have effective teachers working with students. While effectiveness can be defined in myriad ways (Cruickshank & Haefele, 2001), the primary issue is having the most effective teachers guiding the learning of students. Therefore, "without high quality evaluation systems, we cannot know if we have high quality teachers" (Stronge & Tucker, 2003, p. 3).

Instructional Delivery Indicators

Many elements of the teaching process have been correlated to the effectiveness in teaching, including the strategies utilized by teachers. Instructional delivery refers to a teacher's use of varied research-based instructional strategies utilized to engage students in active learning (Stronge, 2006). The FEI outlines the following indicators under the domain of instructional delivery as a guide for effective teaching practices: (a) demonstrating current knowledge of content in a sequential manner; (b) explaining directions, concepts, and content in a logical and sequential manner; (c) using multiple levels of questions and making necessary adjustments; (d) connecting students' knowledge, experiences, and interests to learning goals; (e) presenting lessons clearly and skillfully and using explicit instruction; (f) using appropriate literacy strategies to build

academic vocabulary; (g) using technology to differentiate instruction and enhance learning; and, (h) providing ongoing, timely, and specific feedback to students.

Student Engagement Indicators

Student engagement is vital to academic achievement (Stronge, 2006). According to the FEI, the following indicators are representative of what effective teachers do to engage students: (a) engage students in diverse activity structures; (b) use a variety of strategies to engage students in higher-order learning tasks; (c) engage students in authentic learning, real-life applications, and interdisciplinary connections; (d) use appropriate pace and maximize instructional time for student learning; and, (e) reinforce learning goals throughout the lesson.

Student Engagement

Historical Importance of Student Engagement. Student engagement is a concept of growing interest by practitioners, researchers, and policymakers. The increasing demands and controversy on high stakes accountability in the American educational system have raised a multitude of questions about classroom environment and high-quality instruction. Effective implementation of high-quality and research-based instructional practices has demonstrated to make a significant difference in student achievement. Researchers have studied and identified several classroom practices impacting student learning: “One characteristic of classroom practice that consistently emerged as ‘important’ is the ability to engage students in learning,” a challenge for today’s teachers (Seo et al., 2008, p. 98). Although attention to student engagement may have surfaced, in part, because of school improvement reforms and policies such as NCLB and ESSA, the construct is not new to researchers (Jefferson-Williams, 2014).

Astin's (1984) work on student involvement is considered this age's beginning of research into the construct. During this time, the concept of student development had yet to be clearly defined, appearing in the literature as different variables with different descriptions and meanings. To make sense of the chaos and to expand how educators viewed students, Astin (1984) proposed a simple theory of student development that explained the influences of environmental factors on student learning. Astin's (1984) theory of student involvement consisted of five fundamental tenets. The first is the idea that involvement refers to an investment in energy in an object. This object may be general, such as student experience in school, or specific, such as preparing for a history test. The second tenet is that involvement occurs along a continuum. Not only can different students display different levels of involvement, but the same student may display different levels of involvement in different situations. Third, involvement as a concept is comprised of both quantitative and qualitative characteristics. For example, a homework assignment or test grade can be measured quantitatively, while the act of paying attention and focusing on classwork may be observed through qualitative methods (Astin, 1984). Fourth, student learning is closely related to the quality and quantity of student involvement within a context. Finally, the effectiveness of any student policy or program is related to the ability of that policy or program to increase or maintain student involvement (Astin, 1984). Astin's (1984) theory served as a springboard for increased interest in understanding student engagement. Historically, attempts at engaging students were always directed toward students who were academically deficient or were at risk for dropping out of school (Taylor & Parsons, 2011). However, in recent years the term

student engagement has evolved from only motivating at-risk students to learning strategies that engage all students.

The literature links student engagement to a multitude of positive educational outcomes, including "increased achievement, educational attainment, mental health and wellbeing and the absence of risk behaviors" (Markowitz, 2018, p. 721). The construct is regarded as important because it has the potential to address academic achievement gaps and high school dropout concerns affecting schools (Veiga et al., 2012). Klem and Connell (2004) wrote,

> Student engagement has been found to be one of the most robust predictors of student achievement and behavior in school, a conclusion which holds regardless of whether students come from families that are relatively advantaged or disadvantaged economically or socially. (p. 262)

Accordingly, the concept of engagement disrupts the patterns of inequity and supports students' need to achieve according to their full potential (Lei, Cui, & Zhou, 2018). Consequently, the current climate of educational reform and accountability in America warrants a critical review of its impact on the educational process, stressing the importance of the construct as a significant component of students' academic success that not only has value but also serves as a connection among many academic variables (Appleton et al., 2008; Fredricks et al., 2004; Harbour et al., 2015; Lei et al., 2018). The challenge for many contemporary educators is successfully engaging today's students since they live in a world that engages them differently from past generations. Even with changes in student engagement issues, high levels of engagement in classrooms remain a vital aspect of effective teaching. Student engagement in the classroom has been studied

and defined by numerous researchers with research highlighting that student engagement and its relationship to students' learning process is pivotal to academic achievement. Blondal and Adalbjarnardottir as cited in Harbour et al., (2015) stated that student engagement as a predictor of academic achievement is not a new phenomenon. There continues to be great power in student achievement as a predictor of promoting academic, behavioral, and emotional success in schools (G. W. Ladd & Dinella, 2009).

Forms of Student Engagement

The engagement construct, according to Kuh (2009), "has been in the literature for over seventy years with the meaning of the construct evolving over time" (p. 6). Astin (1984) noted that several decades ago educators and researchers could not agree on a singular definition of engagement. However, as research regarding this subject increased, educators and other stakeholders began to develop a definition of the term. Martin and Torres (2016) defined student engagement as "meaningful student involvement throughout the learning environment" (p. 1). The authors noted that student engagement consisted of the relationship between the student and the community, adults at school, peers, instruction, and curriculum (Martin & Torres, 2016). Student engagement "refers broadly to a student's investment in or commitment to school" (Markowitz, 2018, p. 723). Therefore, student engagement is referenced as multidimensional or meta-construct throughout the literature that is comprised of behavioral (i.e., participation) and psychological (i.e., identification) components (Furlong & Christenson, 2008; Guo, Sun, Breit-Smith, & Morrison, 2015; Harbour et al., 2015).

Researchers have explained various dimensions of the concept in numerous terms to describe central theories related to engagement. Finn (1993) presented the idea of

engagement as a cyclical process. Harbour et al., (2015) describes engagement as "beginning with behaviors of participation, such as attending school and responding during class, which under favorable circumstances lead to a psychological feeling of belonging and identification of school" (p. 5). Kuh (2009) simply refers to it as the quality of effort and involvement in authentic learning activities. Klem and Connell (2004) describe it in two ways: ongoing engagement and reaction to challenge. Ongoing engagement aligns with the explanations of engagement previously presented and refers to student behavior, emotions, and thought process during learning. Reaction to challenge is the students' ability to handle difficulties, specifically, their decision to participate or withdraw when faced with perceived challenges (Duckworth, 2016; Guo et al., 2015; Klem & Connell, 2004). Engagement based on the research is a function of both the construct and the student, which may vary in intensity and duration (Jefferson-Williams, 2014; Kuh, 2009). For example, a student may feel extremely engaged in a class but may be bored in another. Therefore, the methods used to engage students in the learning process influence improved student learning.

Engagement practices that stem from teachers, school, and student actions are believed to address problems such as low achievement, student boredom, and alienation, as well as high dropout rates (Fredricks et al., 2004). Ing et al. (2015) suggest that teachers must intentionally move to involve students in working through challenging instructional concepts. Marzano (2013) stated, "Students' engagement is strongly influenced by what teachers do" (p. 81). Through proper preparation and planning, Marzano (2013) believes that all teachers can increase student engagement. The study of student engagement has led researchers to the identification of various types of

engagement. According to the research students may experience and demonstrate engagement in four interrelated ways: behaviorally, emotionally, cognitively, and academically.

Throughout the literature, student engagement falls under three distinct elements: behavioral, emotional, and cognitive. Fredricks et al.'s (2004) research emphasized the triadic nature of student engagement. This understanding was born out of the prior decade in which educators noted declining academic achievement, student boredom and disinterest, and dropout rates. Earlier research focused on the interaction between context and engagement and the role of classroom instruction and engagement (Dotterer & Lowe, 2011; Fredricks et al., 2004).

Behavioral engagement. Behavioral engagement has various definitions throughout the literature (e.g., effort, attention, and persistence; E. A. Skinner & Belmont, 1993) and aligns with the idea of participation in school and learning activities (Finn, 1993). It involves students' time on task, participation in academic and social events, and concentration with academic tasks related to persistence and effort (Duckworth, 2016; Jefferson-Williams, 2014). The National Survey of Student Engagement defines engagement as behavior (Axelson & Flick, 2011). Fredricks et al. (2004) include attendance, participation, and conduct in their definition of behavioral engagement. Regardless of the definition of behavioral engagement, this type of engagement is marked by the "degree to which students respond to classroom routines, procedures, school work, and school rules" (Jefferson-Williams, 2014, p. 13). Hence, behavioral engagement is students' participation in school throughout the day and during

instructional delivery. However, while easily observed, students' on-task behavior alone cannot guarantee the acquisition of the intended knowledge to be gained.

Emotional engagement. Goodman (2016) explains that "emotional engagement refers to students' visceral reactions in the classroom" (p. 26). It is how students feel about school in general: the relationships established with their teachers and peers, their ability to do schoolwork, and overall sentiment about the school environment (Fredricks et al., 2004). Emotionally engaged students exhibit positive feelings toward educational tasks. Another component of emotional engagement is "connectedness and identification to the school" (Harbour et al., 2015, p. 5), students' sense of belonging, defined as "the way students feel that they value and belong in school" (G. W. Ladd & Dinella, 2009, p. 2). The research suggests that students who have personal connections and believe that the teacher has an interest in their success are more likely to be emotionally engaged in the classroom and with the learning task at hand (Fredricks, 2011). Finn and Zimmer (2012) explained the concept further, identifying the teacher's ability to create a warm learning environment whereby teachers genuinely like their students and, most importantly, believe in their capacity to learn as a critical component of student engagement.

Cognitive engagement. Cognitive engagement is defined throughout the research as students' willingness to put forth an effort and to capitalize on the instructional strategies used to promote understanding. The dimension is divided into two components: cognitive and psychological. The cognitive component typically refers to the self-regulated learning, metacognition, and application of learning strategies while the psychological component stresses students' connection to the school and their sense of

belonging (Finn, 1993; Fredericks et al., 2004; Harbour et al., 2015; Saeed & Zyngier, 2012). The cognitive dimension represents students' personal investment apart from learning approaches and self-regulatory strategies (Fredricks et al., 2004). Fredricks (2011) further affirmed that cognitive engagement is contingent on the students' individual and purposeful actions toward exerting the necessary effort to acquire mastery of difficult skills and to comprehend complex ideas fully. Jefferson-Williams (2014) defines cognitive engagement as "the motivation, effort, and strategy use of students in completing school tasks" (p. 13). The literature describes students who demonstrate cognitive engagement as those who (a) ask clarifying questions, (b) remain persistent through difficult tasks, (c) go beyond the expectation of reading assignments, (d) review previously learned material, (e) study beyond the provided resources, and (f) use self-regulation to guide independent learning (Finn & Zimmer, 2012). It is important to note that cognitive engagement may be affected by various contextual factors such as the students' self-perception of their abilities, the level of parental support, acceptance of peers, and teacher expectations (Finn & Zimmer, 2012; Fredricks et al., 2004). It consequently illustrates the importance of the psychological component of the dimension, which is equally crucial to engagement.

Furlong and Christenson (2008) introduce academics as a fourth component of the commonly used behavioral, emotional, and cognitive engagement. Academic engagement refers to students' degree of involvement in learning (Furlong & Christenson, 2008). Students' interest and emotional involvement in lessons or assigned tasks are also interrelated to academic engagement (Duckworth, 2016; Seo et al., 2008).

Academic engagement. Academically engaged students take ownership of their knowledge by devoting time to learn the content as well as completing school assignments. Subsequently, students engaged in learning are involved in their classwork, persist despite challenges and obstacles, and take pride in their work (Saeed & Zyngier, 2012). Dotterer and Lowe (2011) focused on the mediating capacity of student engagement. These authors found that the association between classroom contexts, such as teacher–student relationships, social–emotional context, and academic achievement was mediated by psychological and behavioral engagement. However, these results held true only for students with no prior achievement difficulties, suggesting that students who already struggle academically may not benefit as much from classroom quality (Dotterer & Lowe, 2011).

More recently, Lei et al. (2018) conducted a meta-analysis to clarify the direct relationship between student engagement and academic achievement. Their findings supported the existing framework, which describes the three main types of engagement—behavioral, emotional, and cognitive. Their results indicated that behavioral engagement had the most substantial effect on academic success, followed by cognitive and emotional engagement. This relationship was cyclical, in that behavioral engagement led to academic achievement, which, in turn, led to increased awareness of the importance of school and the motivation to succeed. This motivation resulted in the improvement of academic performance and greater engagement (Lei et al., 2018). Other researchers have made similar conclusions: "Student engagement is a relevant and multidimensional construct that integrates a student's thoughts, feelings, and behaviors," merging to yield high levels of learning (Furlong & Christenson, 2008, p. 365). Furthermore, Lei et al.

(2018) found a medium positive correlation between student engagement and achievement, suggesting that engagement can impact student achievement. Of the various types of engagement studied, the effect size of behavioral engagement and student achievement was the greatest, followed by cognitive engagement, and emotional engagement, resulting in the lowest effect size. A higher level of overall engagement marked increased student achievement. Students who exhibit a higher level of behavioral and emotional engagement throughout the primary grades demonstrated higher academic achievements than their counterparts. As such, increased engagement may promise to improve student learning and yield higher student achievement (Dotterer & Lowe, 2011; Harbour et al., 2015). Finn and Zimmer (2012) stated, "Students across grade levels who exhibit academic engagement behaviors, such as paying attention, completing homework and coming to class prepared, and participating in academic curricular activities, achieve at higher levels than their less academically engaged peers" (p. 107). Finn and Zimmer (2012) further suggested that the practices of schools and teachers that offer responsiveness to student engagement provide the possibility of enhancing student achievement and attainment for students.

In summary, the primary goal for teachers is to facilitate academic achievement in the classroom. The literature review on engagement highlights several strategies to foster student engagement to academic success (Marzano et al., 2011). In addition to cultivating nurturing relationships, teachers need to provide students with academic rigor, support to meet the challenges, and a supportive classroom culture (Jackson & Zmuda, 2014). Marzano et al. (2011) describe several high-probability instructional strategies to increase student achieving and engagement. These strategies include but are not limited to: setting

objectives, recognizing effort, incentives, and creating cooperative learning opportunities, in addition to, providing verbal and non-verbal cues, as well as including advanced organizers, representations, summarizing and note taking (Marzano, Pickering, & Pollack, 2001). Other important strategies that lead to engagement and subsequent achievement include (1) modeling, (2) questioning, and (3) providing feedback (Harbour et al., 2015). The research findings throughout the literature link behavioral engagement directly to academic achievement (Lei et al., 2018). Fredricks et al. (2004) also recognized the triad nature of student engagement. Consequently, while student engagement is generally defined in terms of behavioral, emotional, and cognitive, it also exists within and is influenced by the relationship with the teacher and the learning environment. Therefore, as stated in the literature review, all four types of engagement contribute to a students' academic and learning experiences. Making student engagement an essential component of effective teaching (Marzano et al., 2011). Table 1 explains the major research findings for the four delineated types of student engagement (i.e., behavioral, emotional, cognitive, and academic) reviewed.

Table 1

Types of Student Engagement and Research Findings

	Engagement Type	Research Findings
1.	Behavioral	✔ Habits formed ✔ Effort/attention Persistence ✔ Affective Reaction ✔ Demonstrate Persistence ✔ Greatest effect on academic success
2.	Emotional	✔ How students feel about school environment ✔ Sense of belonging ✔ They feel valued in school by teachers and peers ✔ Connections to teachers, school and peers
3.	Cognitive	✔ Willingness to put forth effort ✔ Two critical components: cognitive and psychological ✔ Questioning: Ask questions ✔ Relationship/ Self-perception of abilities and teacher expectations is key ✔ Acceptance of peers ✔ Investment in learning
4.	Academic	✔ Ownership of knowledge ✔ Pride in work ✔ Devote time to learn ✔ Teacher/Student relationship plus behavioral ✔ Equal Academic achievement

Instructional Practices

Effective use of quality instructional practices has been demonstrated to make a difference in student learning. According to Seo et al. (2008), researchers in the 1970s began to study and identify classroom practices that made an impact on student learning. A challenge for many contemporary educators is successfully engaging today's students since students live in a world that engages them differently from the way it did in past generations.

Powell, Cleveland, Thompson, and Forde (2012) noted an increased focus on reviewing research and examining studies that explore the significance of engaging

students in activities designed to increase their understanding of concepts. Numerous essential components of active learning can be implemented to enhance student engagement and understanding of concepts in the classroom (Zayapragassarazan & Kumar, 2012). Researchers have linked teacher classroom practices to student engagement and achievement. Some of these practices included specific teaching strategies: (a) communicating clear learning objectives and expectations for the performance of students, (b) utilizing standards-based learning standards and objectives, and (c) infusing the best instructional practices (Holtzapple, 2003).

An emerging consensus exists in the school reform literature about the conditions that contribute to academic success. Two prominent elements found in the research are effective teaching practices and student engagement. Effective teachers employ a variety of teaching practices to keep students focused and engaged while having a substantial effect on student achievement (Stronge, 2018). Furthermore, effective teachers create learning environments that encourage students to participate in classroom activities, ask and answer questions, request assistance, use various learning strategies, and express their enthusiasm for learning (Seo et al., 2008). The research highlights numerous strategies that consistently promote engagement in the classroom, validating the literature supporting that teaching and learning intersect (Hattie & Donoghue, 2016; Strambler & McKown, 2013; Stronge, 2018).

There may be more numerous themes related to the research pertaining to instructional practices, but four recurring themes surface in the literature as common instructional practices for student engagement that differentiate teacher effectiveness. These practices include modeling academic and social behaviors, providing students with

opportunities to respond to curricular content, and providing academic and behavioral feedback and time on task, including the intensity of concentration, endurance to stay on task, and action when given the opportunity (Harbour et al., 2015; Hattie, 2009; Strambler & McKown, 2013).

Modeling. Jablon and Wilkerson (2006) said, "Regardless of the strategies selected" (p. 4) explicit instruction of the strategy is necessary for student engagement to take place. Effective teachers engage their students in deliberate practices until minimal levels of mastery are met: "Deliberate practice increases opportunities to enhance not only mastery but also fluency, the core precision teaching" (Hattie, 2009, p. 184). The modeling strategy is a vital element of explicit instruction.

Effective teachers model the expected product of a lesson. Research identifies modeling as an effective teaching practice that promotes student achievement (Harbour et al., 2015). Harbour et al. (2015) highlighted the relationship that exists between teacher modeling and students' on-task behaviors. Harbour et al.'s (2015) findings indicated that teacher modeling increases students' on-task behavior by nearly three standard deviations. Teacher modeling is an essential component of direct instruction. Research findings reveal that direct instruction has an effect size of .59 on student achievement (Hattie, 2009). The method of teacher modeling allows teachers to clarify through labeling, categorizing, or comparing (Hattie, 2009). Harbour et al. (2015) stated that research reveals that modeling fosters student engagement and academic performance causing an increase in self-regulatory behaviors and high order thinking skills. Teacher modeling promotes meta-cognition—students thinking about their thinking through self-questioning or self-monitoring.

Opportunities to Respond. Opportunities to respond (OTR) are one strategy highlighted by research to produce positive effects on student performance (Harbour et al., 2015; Kern & Clemens, 2007). Kern and Clemens (2007) defined OTR as the opportunities for students to respond actively to an academic question or task. These opportunities promote student engagement, encourage autonomy, and prompt discussions, which help identify students' level of mastery (Harbour et al., 2015). To promote engagement, teachers must contemplate student questions. Marzano et al. (2011) suggested that students might ask themselves questions such as, "How do I feel about this lesson?" They might also ask, "Am I interested in this information?" (Marzano et al., 2011, p. 2). Positive affirmations lead to additional questions according to Marzano et al. (2011), such as, "Is this important to me?" (p. 2). However, if the responses to any of these questions were negative, Marzano et al. (2011) believed learning would be inhibited.

Furthermore, the OTR strategy allows teachers to pose a question, students to respond immediately, and teachers then to provide instant feedback. The review of the literature highlights three characteristics of effective OTR implementation: (a) type of delivery, (b) the rate of presentation, and (c) method of response (Harbour et al., 2015). The type of questions asked in a lesson varies; nonetheless, it is essential to align the question to the students' abilities. Research states that the rate of OTR is contingent upon the purpose of the lesson: "There are positive effects on student engagement when OTR rates approach three per minute" (Harbour et al., 2015, p. x). Questioning is critical since it promotes student engagement, identifies students' level of mastery, and elicits further discussion.

Feedback. Feedback is conceptualized as information provided by an agent regarding aspects of one's performance or understanding (Hattie & Timperley, 2007). According to Hattie (2009), feedback is the most powerful influence on student achievement as per synthesis of 134 meta-analyses. This claim supports the research that suggests that the practice of feedback tends to exhibit improved academic outcomes and more time on task behaviors that lead to academic success (Apter, Arnold, & Swinson, 2010). Studies reveal that specific feedback inspires students to be highly engaged in the learning process (Apter et al., 2010; Dotterer & Lowe, 2011; Harbour et al., 2015). The combination of feedback with effective instruction in classrooms can be very powerful in enhancing learning (Hattie & Timperley, 2007). Teacher feedback includes verbal and nonverbal responses to students' behavioral or academic performance (Harbour et al., 2015). Harbour et al. (2015) stated that feedback can be positive or negative, and it can indicate approval or disapproval. Feedback guides and helps students build accurately upon the concepts they have learned and provides the opportunity to correct the errors while engaging students in the learning process, which, in turn, leads to increased academic achievement.

When teachers use higher levels of effective feedback, students tend to exhibit improved academic outcomes, more time on task, and improved achievement (Apter et al., 2010). Feedback guides students on the development of specific skills and knowledge playing a critical role in their learning. Studies reviewed have demonstrated that positive feedback allows teachers and students to be highly engaged in the instructional process (Apter et al., 2010; Harbour et al., 2015). The significant engagement levels are a result

of students enjoying learning, being motivated, having positive relationships with teachers, and feeling accomplished with assigned tasks (Apter et al., 2010).

Time on Task. Researchers agreed that for students to learn, they must participate in the process. Kuh (2009) explained, "The engagement premise is straightforward and easily understood: the more students study a subject, the more they know about it, and the more students practice and get feedback," the more time they will spend engaged in the task (p. 5). Accordingly, teachers are expected to integrate a variety of diverse strategies that tap into their students' interests and abilities to motivate them to devote time and effort to the learning process. Therefore, to achieve student engagement teachers must create an atmosphere that nurtures participation (Taylor & Parsons, 2011).

Interestingly, the research proposes that when teachers foster a sense of community, students develop healthy relationships and become more engaged in the learning process. Hence, a teacher's role is to create experiences with student engagement in mind (Marzano et al., 2011). According to Kuh (2009), student engagement helps to build a foundation of necessary skills and dispositions people need to live a productive, gratifying life. In other words, engaged students "develop habits of the mind and heart that enlarge their capacity" for lifelong learning and personal growth (Kuh, 2009, p. 5).

The quality of teaching is the key to maximize student learning. Research on exemplary teachers does state that high levels of engagement differ between higher performing classrooms versus lower performing classrooms. Marzano et al. (2011) refers to nine instructional strategies that yield a high probability of enhancing student achievement: (a) identifying similarities and differences; (b) summarizing and note taking; (c) reinforcing effort and providing recognition; (d) homework and practice; (e)

nonlinguistic representations; (f) cooperative learning; (g) setting objectives and providing feedback; (h) generating and testing hypotheses; and (j) cues, questions, and advanced organizers. Our review of literature has highlighted teaching practices that are significant to attaining high levels of student engagement in the classroom (Gettinger & Walter, 2012; Harbour et al., 2015; Strambler & McKown, 2013). According to research, effective teachers increase students' academic engaged time through focusing on explicit learning objectives, modeling, opportunities to respond, and feedback (Gettinger & Walter, 2012; Harbour et al., 2015; Seo et al., 2008; Strambler & McKown, 2013). Ultimately, the instructional design and delivery that effective teachers employ substantially impact students' academic engagement in the classroom, hence increasing student achievement.

Relationship Between Student Engagement and Instructional Practices

The review of the theoretical research demonstrates an ongoing effort by both educators and researchers to increase student engagement within the learning process. This effort is also evident in the numerous educational reforms developed to improve student performance, student achievement, and teacher quality (Jefferson-Williams, 2014; Markowitz, 2018). The theory of student engagement has historically received an increased amount of attention from educators as they contemplate solutions for problems such as the decline of academic motivation and achievement amongst students in addition to high dropout rates (Hattie, 2009; G. W. Ladd & Dinella, 2009). Accordingly, student engagement may potentially address these concerns, since it is directly linked to academic achievement for virtually all students (Christenson et al., 2012; Dotterer & Lowe, 2011; G. W. Ladd & Dinella, 2009; E. A. Skinner & Pitzer, 2012).

Engaging students in the learning process is not an easy feat and one that has challenged educators for decades, specifically in 21st-century classrooms where traditional schooling is not considered very interesting and schools are perceived as "boring" (Fullan & Quinn, 2016, p. 77). Teachers often compete with an overabundance of digital and entertainment distractions accessible to students of all ages, making student engagement an even more daunting task. Despite the difficulties to engage students, the positive benefits outweigh the challenges. The literature emphasizes that student engagement not only increases student achievement but also transforms student thinking within the learning framework (Duckworth, 2016; Hattie & Donoghue, 2016; Kuh, 2009). Research stresses the importance of creating learning environments that engage students in the learning process by leveraging digital experiences, using rigorous pedagogical practices that foster deep learning connections (Fullan & Quinn, 2016; Stronge, 2018).

Engagement is a central aspect of effective teaching (Marzano et al., 2011). A primary goal of educators is to promote academic success, and several strategies exist that foster student engagement, a means of achieving success. Furthermore, Marzano et al. (2011) suggested, "Student engagement happens as a result of a teacher's careful planning and execution of specific strategies" (p. 1). Effective classroom practices include using inquiry-based and problem-based learning, ensuring that the content is relevant to the students' lives, incorporating multimedia tools into instruction, providing instruction that is appropriately challenging, and using authentic assessments (Marzano, 2013; Taylor & Parsons, 2011). Jackson and Zmuda (2014) summarized the necessary factors related to engagement in an alliterative manner, focusing on clarity, context,

culture, and challenge. Teachers should help students understand why they are doing what they are doing in the classroom and enable them to track their progress over time. Teachers should also help students connect prior knowledge to new material, anticipate confusion and intervene promptly, in addition to providing growth-oriented challenges and feedback. Other important strategies to promote engagement and subsequent achievement include (a) modeling the behaviors that lead to positive learning outcomes such as problem-solving or making generalizations; (b) asking questions of students and providing opportunities for them to respond and demonstrate their understanding; and (c) providing positive, growth-oriented feedback (Harbour et al., 2015).

Positive relationships between teachers and their students are paramount in fostering engagement. Pianta, Hamre, and Allen (2012) noted that an essential aspect of this relationship is sensitivity on the part of the teacher. Teachers can demonstrate sensitivity by recognizing and promptly responding to student needs. Students taught by sensitive teachers are more engaged in class and self-reliant. Roorda, Jak, Zee, Oort, and Koomen (2017) also emphasized the value of warm and positive teacher–student relationships, reporting that student engagement played a significant mediating role between the quality of the relationship and academic achievement. Research supports that the increase in student engagement kindles the improvement of academic achievement (Fredricks et al., 2004; Harbour et al., 2015). Students who are engaged are more likely to acquire and maintain the intended learning objectives (Manigault, 2014). Student engagement is a crucial component of improving student achievement that is expected and deserved by stakeholders (Goodman, 2016).

Students connect new ideas to old ideas through deep level engagement: “Deep level engagement involves the use of elaboration and organization strategies” (Blumenfeld, Kempler, & Krajcik, 2006, p. 475). Teachers who make instructional decisions that challenge and interest students are likely to create learning environments where engagement is high (Fredricks, 2011). The use of research-based strategies such as cooperative groups can enhance student engagement (Fredricks, 2011; Marzano et al., 2001). Harbour et al. (2015) identified three research-based strategies that when employed accurately, appropriately, and with fidelity are found to be effective in increasing student learning: teacher modeling, opportunities to respond, and feedback yield a higher return of engagement and thus achievement.

Two of the four keys to student engagement as described by Jackson and Zmuda (2014) include creating a supportive classroom culture and providing the appropriate instructional challenge. When teachers demonstrate a genuine interest in student learning and provide opportunities for the student to generate solutions from creative ideas, real engagement is fostered: “Strategies that promote in-depth inquiry and metacognition have both been found to be related to instruction student engagement” (Finn & Zimmer, 2012, p. 106). According to Gettinger and Walter (2012), the strategies teachers employ to deliver instruction and how the implementation of the strategies are structured have a significant impact on academic engagement. The use of multiple strategies and specifically targeted design increases student engagement. The level of student engagement maintained during instruction may serve as an underlying factor to the effectiveness of teaching and the increase in student achievement. It is expected that by promoting a learning environment that encourages challenging learning tasks that engage

students in learning, student achievement will improve. However, the emotional classroom climate is equally important to achieve student engagement. The emotional climate of a classroom consists of teachers who are sensitive to the needs of students, caring and nurturing teacher–student relationships, teachers who consider the viewpoints of the students, free of sarcasm or harsh discipline. Willms, Friesen, and Milton (2009) also supported the idea of a positive classroom environment as a predictor of academic success, noting that to achieve such a climate, teachers must convey high expectations for student success, make effective use of learning time, and provide appropriate instructional challenges. Stronge (2018) summarized his findings of qualities of effective teachers with four overarching statements describing the effective teacher for all students. The four Cs of effective teaching are caring, complexity, conscientiousness, and communication, confirming *caring* as a characteristic of effective teachers.

Finally, the implications of the findings, although based on a small sampling, lend empirical support to the existing research on the construct of student engagement. Studies have highlighted instructional strategies that consistently and reproducibly foster and maintain student engagement in the classroom (Strambler & McKown, 2013). A student's passion and emotional involvement in the lesson or assigned task is correlated with academic engagement (Seo et al., 2008). According to Marzano et al. (2011), "If students are not engaged, there is little, if any, chance that they will learn what is being addressed in class" (p. 1). The role of the classroom teacher is to develop lessons with student engagement in mind.

CHAPTER 3

METHODS

Chapter 3 defines the primary purpose of the study and describes the methods. This chapter examines the setting and sample utilized for the study in addition to, how the data were collected and analyzed. The design of this mixed-methods, comparative case analysis research is intended to examine the relationship between student engagement and instructional delivery and its relationship to student achievement. At the same time, this study will also help to identify and determine if similarities or differences exist in the level of engagement and instructional delivery across four schools. This study will assist the district and school site leaders to identify the correspondence between instructional strategies and student engagement. In addition, it will further support teachers and build their capacity around instructional delivery to yield higher levels of academic achievement.

Research Questions

The primary research questions guiding this research study are:

1. To what degree and in what ways are the indicators of the MDCPS IPEGS, Instructional Delivery standards implemented in the selected fourth- and fifth-grade classrooms across four selected district schools?

    a. What are the frequencies and types of instructional strategies employed in the selected fourth- and fifth- grade classrooms across four selected district schools?

2. To what degree and in what ways are the indicators if the MDCPS IPEGS Student Engagement standards implemented in selected fourth- and fifth-grade classrooms across four selected district schools?
    a. What levels of student engagement exist in selected fourth-and fifth-grade classrooms across four selected district schools?
3. What patterns emerge related to the use of instructional strategies and associated student engagement in selected fourth- and fifth-grade classrooms across four selected district schools?

Participants

This research provided an analysis of patterns for instructional delivery and student engagement in selected classrooms. The population for this cross-case analysis study was teachers from four different Elementary and K–8 schools in the district of MDCPS. The setting for this cross-case analysis study was four public elementary and K-8 schools in the district of MDCPS. The configuration for the participating schools are as follows: School A—Grades K–8; School B—Grades Pre-K–5; School C—Grades Pre-K–5; and School D—Grades Pre-K–8. The focus grades for this study were fourth and fifth. Both grade levels were selected because they are included in the Florida Standardized Assessment accountability group. They both generate data measures of proficiency and ability to compare learning gains of student performance from previous years. The student membership for each school varies: School A—2143, School B—439, School

C—407, and School D—1249. The geographical location of all the four schools is considered urban within the district of MDCPS, the fourth largest school district in the nation.

The selection of the schools was based on convenience and accessibility. We serve as the school site administrators for these schools. Although this study was based on a convenience sample of four schools, some dissimilarities that should be noted among the schools include total student membership, economic status, levels of district support (ranging from Tier 1 to Tier 3), percent of English language learners, percent of students with disabilities, and proficiency rates according to the 2018 Florida State Assessment data (Table 2). Four fourth- and fifth- grade general education teachers from each of the selected Elementary and K–8 schools participated in the study. Teachers were selected based on volunteer participation; thus the sample was convenience based.

Table 2

Participating School Demographics

School	No. Students	% FRPL	Tier System: District Support	% ELL	% SWD	% 2018 ELA Proficiency	% 2018 Math Proficiency
A	2143	50	1	23	8	72	71
B	439	72	1	31	21	71	71
C	407	95	3	24	19	45	54
D	1249	65	1	15	9	62	60

Note. FRPL = Free and reduced-price lunch; ELL = English Language Learner; SWD = Students with Disabilities; ELA = English Language Arts; Tier System District Support = Level of support provided by school district, ranging from 1 minimal level of support to 3 maximum level of support

Convenience sampling, according to Creswell and Creswell (2018), is also called accidental sampling and it is a type of nonprobability sampling that does not include random selection of participants. The sample is taken from a group of people who are

available and willing to participate. Convenience sampling was utilized in this study to include the population that is nearby because of a limited number of participants that may be available in any given school based on the identified grade levels (Salkind, 2010).

Recruitment of the participants consisted of eliciting participation amongst teachers in Grades 4 and 5. Teachers received a letter of consent to acknowledge their participation in the study (Appendix B). The number of participants was 16, totaling four teachers per school and two per grade level.

Research Design

This study used a mixed-methods design which will provide a comparison of the diverse and pragmatic perspectives presented by the quantitative and qualitative data collected. According to Creswell and Creswell (2018), mixed methods is beneficial when the researcher can rely on the strengths of both qualitative and quantitative, to answer the research problem. Convergent mixed methods design approach was implemented in this study. Convergent mixed method is a "single-phase approach, a researcher collects both quantitative and qualitative data, analyzes them separately, and then compares the results to see if the findings confirm or disconfirm each other" (Creswell & Creswell, 2018, p. 217). A convergent one-phase design entails that the researcher concurrently conducts the quantitative and qualitative elements in the same phase of a research process, weighs the methods equally, analyses the two components independently, and interprets the results together (Creswell & Plano Clark, 2011).

For this reason, the convergent one-phase design method is suitable for this research since it will allow the triangulation of the process by comparing quantitative results, the frequency counts of types of instructional strategies employed and levels of

student engagement with qualitative findings, the observed type of instructional strategies and IPEGS indicators for Instructional Delivery and Student Engagement. This method is appropriate for the research problem because the researchers can use the collected quantitative statistical results and then discuss the qualitative data, observed instructional activity, that would either confirm or disconfirm the statistical results. According to Creswell and Creswell (2018), this design approach consists of three phases: (a) analyze and code qualitative data; (b) analyze quantitative findings in statistical terms; and (c) integrate and analyze both results, identifying the patterns that emerge.

Data Sources

The observation tool Differentiated Classroom Observation Scale (DCOS; Cassady et al., 2004) and the IPEGS evaluation system developed by Dr. James H. Stronge (MDCPS, 2018) were the instruments used to collect data for this study. The DCOS is a tool developed to examine the differential learning activities in a classroom setting. The observation component of this tool involves a focused and detailed assessment of the classroom environment as explained by Cassady et al. (2004), "the observation phase is a detailed examination of the classroom environment and learning experience that keeps the observed experiences for identified and non-identified group separate" (p. 140). Therefore, observers must have a keen understanding of the teaching and learning process.

Differentiated Classroom Observation Scale. One instrument used for this study is the Classroom Observation Phase Protocol form (Appendix C). The Classroom Observation Phase Protocol is an observational protocol that utilizes 5-minute observational segments, a scoring sheet, activity codes, and descriptors. The instructional

activity codes (Appendix A) used to identify the primary instructional activity, priority elements, observed during the use of the protocol. The DCOS scoring form is included in Appendix D. This form was utilized to collect data during classroom observations. The goal of IPEGS is to promote the professional growth of teachers through monitoring, examining, and applying relevant data collected within a system of meaningful feedback (MDCPS, 2018). IPEGS is centered around eight performance standards for instructional personnel. Performance Standard 4: Instructional Delivery and Engagement aligns with the research questions of this study and the portion of the instrument used.

***DCOS validity and reliability*.** The validity and reliability statistics for the DCOS (Cassady et al., 2004) requires additional documentation. Previously documented research has indicated a causal relationship exists between student engagement and effective instructional practices (Dotterer & Lowe, 2011; Furlong & Christenson, 2008; Lei et al., 2008). The observation protocol was initially developed to examine the strategies employed to meet the needs of gifted children receiving instruction in grade-level classroom settings that applied "cluster grouping" (Gentry, 1999). Cassady et al. (2004) validates the instrument by stating that "the protocol has utility in the field of evaluating teachers' practices in providing differentiated instruction and capturing the general classroom environment for both the identified and nonidentified populations" (p. 140). Therefore, this scale can be of use to a wide audience interested in teaching and learning, including school administrators, professional development teams, evaluators, and individual teachers interested in gathering descriptive data on how to meet the instructional needs of all students. Classroom settings that involve differentiated instruction to meet the needs of established groups of students could effectively utilize

the basic structure of this instrument. The DCOS includes three primary components: the pre-observation interview, the observation period, and the post-observation debrief and reflection. For this study, only the observation period portion was used. The observation phase is a detailed examination of the classroom environment and learning experience that keeps the observed lessons for the identified and non-identified groups separate. However, in this study, the observation portion was applied to all the students receiving the lesson during the learning experience.

DCOS provides a viable option to researchers and evaluators attempting to gather systematic documentation of teachers' implementation of best practices and to explore the relationships among the variety of classroom variables addressed within the DCOS. The DCOS although modified for this study can provide a significant contribution to the field of education. There are several advantages offered by the observation portion of this scale. The scale provides an opportunity to observe teachers in multiple, short time segments that generate data specific to instructional activities, interpersonal relations, student engagement, and locus of learning. In addition, the holistic rating of the scale provides information regarding the overall impression of the instructional setting. Furthermore, the scale was developed by an interdisciplinary team of experts in the areas of gifted education, qualitative research, evaluation methodology, distributed data systems, and research design. Lastly, the scale provides the observers with the ability to track each segment separately to review the relationships among specific pedagogical patterns and student engagement or cognitive activity (Cassady et al., 2004).

While the instrument was initially developed to study, the strategies employed to meet the needs of gifted students receiving instruction, the tool can also be used to

appraise the approaches in any classroom setting implementing differentiated instruction to meet the needs of groups of students at various levels (Cassady et al., 2004). Practitioners conducted live and video-based observations using this instrument. The authors of this instrument discovered some challenges with the tool. The two primary challenges include: (a) it takes time for an individual to be able to use the instrument as intended, and (b) some observers found it difficult to monitor all the factors targeted in this observation (Cassady et al., 2004). According to the authors of the tool, they have been successful in training both experienced gifted education teachers and graduate students with the DCOS (Cassady et al., 2004). The DCOS includes rigorous practices to collect documentation and evaluation data. No statistical analysis has been reported for this instrument. The DCOS captures the instructional practice with the entire classroom in addition to gathering data on how gifted and talented students receive differentiated instruction through adjustments in curricular activities. Furthermore, the DCOS provides comparative information about different instructional practices with diverse groups of students.

Inter-Rater Reliability with Use of DCOS. Inter-rater reliability involves two or more evaluators who are similarly trained demonstrating the capacity to reach independent evaluations that are the same or similar. Both criterion-related reliability and inter-rater reliability are typically established by training. As previously mentioned, to demonstrate and certify inter-rater reliability, we conducted calibration sessions before the collection of any data. Furthermore, this calibration ensured that the practitioners had a similar clinical eye. Components of the DCOS are available to measure student engagement and the relationship with the instructional strategies presented through a

system of disaggregated data gathered through a series of short observational segments, 5-minute intervals.

Instructional Performance Evaluation and Growth System. The IPEGS evaluation system developed by Dr. James H. Stronge provides a "balance between structure and flexibility" (MDCPS, 2018, p. 6). The goal of this evaluative tool was to promote the professional growth of teachers through monitoring, examining, and applying relevant data collected within a system of meaningful feedback (MDCPS, 2018). This system focuses on gathering and reporting data as a means of documenting teacher performance based on well-defined performance standards. IPEGS is centered around eight performance standards for instructional personnel. Performance Standard 4: Instructional Delivery and Engagement addresses the academic needs of students through the implementation of various instructional practices and technologies that engage the learners (MDCPS, 2018). This standard's indicators are aligned to the research presented in this review of delivering explicit instruction, using multiple levels of questioning and providing ongoing and meaningful feedback.

***IPEGS validity and reliability*.** IPEGS has extant research supporting its validity and reliability. To ensure its content validity, the framework of teacher effectiveness system is grounded in a broad review of existing research that explores both teacher and leader effects and their effective qualities. The doctoral dissertation conducted by Williams (2010) found high levels of agreement between the perceptions of teachers and administrators on the topic of teacher effectiveness using the IPEGS framework as an operational definition of teacher effectiveness. Further results indicated that demographic factors played a minimal role in influencing the perceptions of teachers and

administrators. These findings suggest that the IPEGS teacher effectiveness model produces highly consistent and strong agreement among both.

Overall, research indicates that there is a substantial connection between student achievement and learning gains and ratings on a teacher's performance standards. This finding implies that the IPEGS evaluation system is measuring teacher effectiveness authentically to a substantial degree (Stronge et al., 2011). Teachers and administrators share the perception that the IPEGS evaluation system contributes to an increase in communication between teachers and school leaders, encouraging self-reflection and awareness of the gap between desired and actual practices (Stronge et al., 2011). Numerous research studies, using classroom observation and other data collection measures, have found that a relationship exists between teachers exhibiting the types of qualities in the IPEGS evaluation system and students' learning progress in various subject areas (Stronge et al., 2011; Stronge et al., 2007), thus indicating a robust criterion validity of the IPEGS model. In conclusion, the IPEGS evaluation system has a rich research background found to be consistently valid and reliable by several empirical studies (Stronge et al., 2011; Stronge et al., 2007).

The practitioners observed the participants in their authentic teaching environment using 5-minute intervals as indicated in the DCOS observation tool. During each 5-minute interval, the practitioners documented (a) the instructional activity, (b) level of student engagement, (c) level of cognitive demand, and (d) the "learning director" for the observed classroom (Cassady et al., 2004, p.3; Grant et al., 2013). Practitioners documented all instructional activities observed within the specified period using a set of Instructional Activity Codes provided within the protocol. Student

engagement data collected was based on the percentage of students actively engaged in the 5-minute segments. Classifications of High, Moderate, or Low based on percentages were assigned to the levels of engagement (Cassady et al., 2004; Grant et al., 2013). The practitioners rated each of the six cognitive levels as not evident, evident, and well represented. A well-represented rating indicates optimum student engagement throughout the lesson and factors the level of cognitive activity attained and length of engagement. The last data point collected with the scale was centered around the "learning director" or teacher, facilitating the learning and designing lessons. A Likert scale of 1 to 5 was used to rate teacher-directed learning and student-directed learning components. This scale evaluated the levels of engagement generated by the instructional practices presented, the activity's cognitive level, and the decisions made by the learning director. This instrument was designed to record student engagement in the teaching–learning process at regular 5-minute intervals. The instrument is a modified version of the tool intended for an earlier study related to the efficacy of national board–certified teachers (Bond, Smith, Baker, & Hattie, 2004).

Data Collection

The purpose of this study was to identify what patterns emerged related to the use of instructional strategies and associated student engagement in selected fourth- and fifth-grade classrooms across four selected district schools. As previously mentioned, the study employed a mixed-method approach using the convergent one-phase design. The College of William and Mary's Institutional Review Board and the MDCPS Research Review Committee approved the data collection for this study. Once both review boards granted permission for the study, a meeting with the teachers from the four participating

schools was conducted. During this meeting, teachers were informed of the topic, intent, design of the study, and the roles and responsibilities of participants. Potential participants were provided with a consent form indicating voluntary participation, guaranteeing confidentiality and describing the nature of the study (Mertens & Wilson, 2012). Following the consent to participate in the study, the participants were informed of the specific procedures for the study including the length and the focus of the observation and information regarding the instrument that will be utilized during the observation. A schedule for the observations across the four schools was developed and shared with the participants. Confirmation of anonymity was provided to all participating teachers. Since participating teachers are staff members of the practitioners, extra care was given to ensure that they did not feel pressured or coerced into volunteering in the study. Therefore, practitioners dedicated a substantial amount of time during the initial meeting with the potential participants to provide transparency by outlining the intent of the study, data collection tools and the goals. Additionally, no incentives were provided to participating teachers. Teachers were also informed that their participation in the study will not affect their summative evaluations. Teacher and student names, along with other private information, were not included in the study and will be protected as proprietary standards of human rights (Yarbrough, Shulha, Hopson, & Caruthers, 2011).

Positionality

The study was designed to gather data through classroom observations using DCOS and IPEGS Performance Standard 4: Instructional Delivery and Engagement. Both tools assisted practitioners to capture data on teacher and student behaviors to potentially determine teaching patterns and levels of student engagement and in the

classroom. As such researchers and participants have the potential to impact the research process (Bourke, 2014). In this study, teacher volunteers are staff members of the practitioners. Although teachers were asked to volunteer for the study, we serve as their administrators. For this reason, we consciously incorporated steps throughout the research process to reduce potential biases. First, we calibrated using the DCOS and IPEGS tools. Calibrations sessions were conducted using videos and during authentic classroom instruction. We debriefed following each calibration session to discuss observations and verify alignment amongst observers. Additionally, a rotation schedule was created delineating practitioners' roles as observers. Consequently, the rotation schedule precluded the site administrator from observing teachers at their school site. During our own school site observations practitioners solely observed student behaviors.

Calibration

Meanwhile, the researchers engaged in calibration sessions to ensure alignment prior to conducting the observations. Calibration included viewing prerecorded 20-minute videos of teachers instructing and real time live observations of instruction providing opportunities to practice using the instruments. The raters calibrated simultaneously breaking up the focus of the observations. Debriefing took place after every 20-minute interval focusing on the specific targeted activity to ensure that alignment took place. This also ensured that the raters identified the primary activity observed during the observation. The raters were required to average a 90% inter-rater reliability during the calibration sessions. The purpose of the calibration was to ensure inter-rater reliability and the stability and consistency of two or more independent scores. These sessions ensured that all raters involved were conducting the observations with the same

instructional lens and ensuring that standards were interpreted equally with a neutral appraisal. Calibration sessions also ensured that any trial and error was eliminated and did not play a factor during the actual observations. These sessions promoted consistency, control bias, and sampling errors (Cassady et al., 2004; Grant et al., 2013).

The four raters divided into two groups; two evaluators focused on teacher behaviors and the other two on student behaviors. All four observers watched the videos simultaneously. The raters paused the video every 5 minutes, debriefed, reached a consensus and then continued watching the videos in 5-minute intervals. The observers identified and discussed the primary instructional activity, cognitive level, student engagement levels, the role of the learning director, and which IPEGS indicators were observed. Doing so ensured adequacy and accuracy during data collection. It is imperative that individuals using these instruments distinguish between the observed instructional practice, recognize the cognitive level of the activity and levels of student engagement (Cassady et al., 2004; Grant et al., 2013). The calibration sessions continued until all raters reached 90% consistency across all observed categories with both instruments (Lauer, 2006). Once all raters reached consensus utilizing the instruments, a 30-minute classroom observation schedule was created to begin data collection (Appendix E).

Classroom observations were conducted by the four raters simultaneously. All raters visited the classrooms together and began and ended their observations at the same time period. All of the observations were conducted within a two-week period. The raters observed the participants in their authentic teaching/learning environments using 5-minute intervals as a definite observation period. The observations took place for 30

minutes of the instructional block. The participants shared their lesson plans with each observer. The observers documented (a) the primary instructional activity, (b) level of student engagement, (c) level of cognitive demand and (d) the "learning director" for the class using the DOCS observation form (Cassady et al., 2004, p.3; Grant et al., 2013). Two raters focused on observing the learning director while the other two observers focused on students and documented the levels of students' engagement observed. The raters' roles changed on a rotating schedule to reduce bias.

The observers evaluated the levels of engagement generated by the instructional practice presented, the activities cognitive level, and the decisions made by the learning director through diverse forms of Likert scales. "Cognizant of the need to identify and differentiate which methods of instruction were engaging for students," data was also collected on the level of student engagement during a time-period (Cassady et al., 2004, p. 141). Student engagement data was collected based on the percentage of students that were actively engaged during a predetermined time within the 5-minute segment. Student engagement was ranked as High (80–100%), Moderate (21–79%), or Low Engagement (0–20%). The raters also documented the level of complexity observed within each interval. The cognitive conceptual level was also observed and recorded based on the revised version of Bloom's cognitive taxonomy—knowledge, comprehension, application, analysis, evaluation, and creation utilizing a 3-point scale (e.g., 1—*not evident*, 2—*evident*, 3—*well-represented*; Cassady et al., 2004). A well-represented rating indicated optimum student engagement throughout the lesson and factors the level of cognitive activity attained and length of engagement. The last data point to be collected with this scale is centered around the "Learning director," who directs the

learning or makes the decisions about the learning activities. A Likert scale of 1 to 5 was used to rate teacher-directed learning, ranging from 1, teacher directing all the learning to 5, students directing all the learning. This tool identified the levels of engagement yielded according to the instructional activity, the cognitive level of the activity, and who directed the activity.

A checklist adapted from IPEGS (Appendix F) was the second instrument used in conjunction with DCOS by the raters' when observing the learning director. This checklist entailed a Likert scale, in which raters were given choices that reflect the varying degrees of intensity of the observed behaviors, ranging from highly effective to unsatisfactory (Lauer, 2006). During the 5-minute observation, the observer rated the intensity of each of the 12 indicators of the Instructional Delivery and Engagement Performance Standard from IPEGS observed. The checklist revealed which indicators and its degree of intensity of the standard was implemented in the observed classrooms.

Data Analysis

This study implemented descriptive and inferential data analysis approaches. Mertler (2017) defines descriptive statistics as simple mathematical procedures that summarize the significant amount of numerical data. The data sets were collected and coded for each 5-minute observation period. This study employed measures of central tendency, a focus on mean, range, and frequency counts (Mertens & Wilson, 2012). The mean and frequency counts for the levels of student engagement and the cognitive conceptual level were tabulated. Additionally, the Likert scale was utilized since the teacher versus student director of learning was on a five-point scale (Mertens & Wilson, 2012). This study also employed the use of inferential statistical analysis. Inferential

statistical procedures were implemented to infer the possibility of the outcomes occurring in the population rather than just the sample (Mertens & Wilson, 2012). The data collected was ordinal and interval/ratio therefore Spearman rank-order (Spearman Rho) and Pearson Product Moment correlations (Pearson r) was applied to measure the relationship between the variables. Practitioners analyzed and aligned the primary instructional activity and indicators from IPEGS Standard 4 Instructional Delivery and Engagement Performance that generated higher levels of engagement according to the mean and frequency data collected (Appendix G).

The following are the data analyses that were utilized in this study.

Step One. The DCOS observations identified and coded the primary instructional activity observed within each 5-minute observation period. The primary instructional activity was defined as the instructional practice that was most prevalent and dominant during the observed 5-minute interval.

Step Two. The raters coded the data points collected for each observational period such as cognitive level of the activity, the level of student engagement, and the role of the learning director.

Step Three. The raters encoded each of the IPEGS indicators observed for each of the 5-minute observation period. This allowed the raters to align the IPEGS indicators to the primary instructional activity observed.

Step Four. After each 5-minute observation period was coded, the raters documented the frequency of each primary instructional activity code observed and IPEGS indicators.

Step Five. The raters identified the mean level of engagement of the most frequent primary instructional activity and IPEGS indicators observed as identified in step four.

Step Six. The raters identified the relationship between most frequent primary instructional activity and the mean levels of student engagement observed.

This study explored the following research questions using the highlighted data sources (Table 3).

Table 3

Alignment of Research Questions to Data Source Data and Analysis

Research Question	Data Sources	Analysis
1. To what degree and in what ways are the indicators of the MDCPS IPEGS, Instructional Delivery standards implemented in the selected fourth- and fifth-grade classrooms across four selected district schools?	IPEGS-Adapted Checklist	Descriptive Statistics
a. What are the frequencies and types of instructional strategies employed in the selected fourth- and fifth-grade classrooms across four selected district schools?	DCOS	Descriptive Statistics
2. To what degree and in what ways are the indicators of the MDCPS IPEGS Student Engagement standards implemented in selected fourth and fifth-grade classrooms across four selected district schools?	IPEGS-Adapted Checklist	Descriptive Statistics
a. What levels of student engagement exist in selected fourth- and fifth-grade classrooms across four selected district schools?	DCOS	Descriptive Statistics
3. What patterns emerge related to the use of instructional strategies and associated student engagement in selected fourth- and fifth-grade classrooms across four selected district schools?	DCOS	Inferential Statistics

Note. MDCPS = Miami-Dade County Public Schools; IPEGS =Instructional Performance Evaluation Growth System[; DCOS = Differentiated Classroom Observation Scale

Timeline

Researchers adhered to the following timeline during this study (Table 4).

Table 4

Dissertation Timeline

Phase	Activities	Completion Dates
II—Preliminary Steps to Conducting Study	Approval requested from W&M IRB	July
	Secured permission from MDCPS to conduct research study	August
III—Conduct Study	Executed study as approved by dissertation committee	October-November
	Collect, tabulate, and analyze data or findings	October-December
	Wrote Chapters 4 and 5	December-January
	Communicated with dissertation chair throughout	Ongoing
IV—Dissertation Defense	Scheduled defense date	December
	Submitted final dissertation to committee	January
	Prepared for dissertation defense (e.g., PowerPoint presentation)	January
	Defend dissertation	January
	Complete remaining steps for graduation ● Version approved by committee submitted to EPPL dissertation editor by chair ● Make all required changes to dissertation ● Submit final approved dissertation electronically ● Complete all graduation forms and other requirements	February- March

Note. EPPL =Educational Policy, Planning & Leadership

Delimitations, Limitations, Assumptions

Delimitations. Delimitations for this study included a limited sample size and limited use of the instrumentation tool. This study focused only on fourth and fifth-grade

students from different district schools. The limited number of participating students and responding teachers may have reduced the applicability of the research to the rest of the school population causing a threat to the credibility or transferability of this study. Experimental researchers need to identify potential threats to the internal validity of their experiments (Creswell & Creswell, 2018). The selection of participants posed a threat to the internal validity of the study. Transferability of the study may have been restricted due to the small sample size which may not be reflective of a comprehensive district view (Mertens & Wilson, 2012). A threat to the external validity of the study is the interaction of selection and treatment.

Additionally, the limited use of the DCOS instrument tool was another delimitation. The DCOS was created with the intent to observe gifted students, and it included three primary components: the pre-observation interview, the observation period, and the post-observation debrief and reflection. For this study, only the observation period section of the tool was utilized in a heterogeneous classroom. The tool was also created to be used to observe an identified and non-identified set of students. However, for this study, it was used to observe an entire classroom. Another delimitation to the use of this tool was the focus on only the primary instructional activity during the 5-minute observation period. This may have affected the levels of student engagement generated from a secondary instructional activity that was documented. Accurate use of the implementation tool must also be considered to determine outcome validity specifically since observations are susceptible to interpretation (Mertler, 2017). The usage of the tool posed a delimitation as the tool was not being utilized as it was originally intended.

Limitations. A significant limitation of the study was the role of the researcher as the school administrator. Personal biases were considered since practitioners served as raters, instructional leaders and evaluators of the participating schools (Yarbrough et al., 2011). The principal of the school is in a position of power, which could impact responses. Another limitation of the study was conducting the observations as a group. A potential threat to the credibility of the study may have been conducting simultaneous observations as a group, potentially altering teacher and student behaviors ultimately tainting data results (Creswell & Creswell, 2018). Teachers and students behave differently during the observations. Observed lessons may not be a genuine reflection of the daily occurrences in the classroom. The selection of participants, their years of experience as well as their level of content knowledge and student academic levels can also alter observation results.

Assumptions. The key assumptions of this study were as follows: (a) teachers all have the same pedagogical knowledge; (b) teachers all have been afforded equal training opportunities; (c) teachers all have positive student-teacher relationships; (d) students all have positive student-teacher relationships; (e) students are all motivated to learn.

Ethical Considerations

The study adheres to the Program Evaluation Standards developed by the Joint Committee on Standards for Educational Evaluation to include the areas of utility and propriety (Yarbrough et al., 2011). As the purpose of this study was to identify the correlation between high levels of student engagement and instructional practices in classrooms and emerging patterns, therefore it is necessarily focused on utility. Teacher participation was entirely voluntary. The collection of student-level data did not involve

any interactions with students that do not already regularly occur and are reported only in aggregate; therefore, students were not directly affected in any way. Finally, it was critical to share findings with all stakeholders in an appropriate manner, maintaining the anonymity of the individuals providing information or other data. Schools were referred to as a letter and teachers as a letter and number, and there will be no identifiable student information included. This also assisted in providing transparency moving forward with any recommendations generated from the study.

This study was approved by the College of William and Mary's Institutional Review Board (IRB) and MDCPS-IRB. Upon approval of the study, data collection commenced.

CHAPTER 4

FINDINGS

This study investigated the relationship between student engagement, instructional delivery, and student achievement through mixed-methods, comparative case analysis. The study also attempted to determine if similarities or differences existed in the level of engagement and instructional delivery across four schools. Data were collected through classroom observations of 16 teachers working in four Miami-Dade County Public Elementary and K-8 schools. The participants were diverse in their years of teaching experience, educational schooling, and geographic regions. All observations were conducted in fourth- and fifth-grade classrooms. The study used the Differentiated Classroom Observation Scale (DCOS; Cassady et al., 2004) and the IPEGS evaluation system developed by Dr. James H. Stronge (MDCPS, 2018) to gather the observation data in selected fourth- and fifth-grade classrooms.

The data collection and analysis resulted in findings that were used to satisfy the purposes of this research. A convergent mixed methods design facilitated a single-phase approach in which qualitative and quantitative data were collected simultaneously. This single-phase design method was suitable for this research since it allowed the triangulation of data sources and findings by comparing quantitative results, the frequency counts of types of instructional strategies employed and levels of student engagement with qualitative findings, and the observed type of instructional strategies and IPEGS indicators for Instructional Delivery and Student Engagement. This concurrent mixed methods design approach allowed the researchers to conduct an

independent analysis, compare the findings, and substantiate results (Creswell & Plano-Clark, 2011).

In this chapter, the analyses provide answers to the following research questions:

1. To what degree and in what ways are the indicators of the MDCPS IPEGS, Instructional Delivery standards implemented in the selected fourth and fifth-grade classrooms across four selected district schools?
    a. What are the frequencies and types of instructional strategies employed in the selected fourth and fifth-grade classrooms across four selected district schools?
2. To what degree and in what ways are the indicators of the MDCPS IPEGS Student Engagement standards implemented in selected fourth- and fifth-grade classrooms across four selected district schools?
    a. What levels of student engagement exist in selected fourth and fifth-grade classrooms across four selected district schools?
3. What patterns emerge related to the use of instructional strategies and associated student engagement in selected fourth and fifth-grade classrooms across four selected district schools?

As indicated in Chapter 3, data were collected via a triangulation process. As part of this process, the frequency counts of types of instructional strategies employed and levels of student engagement were compared to the qualitative findings generated by the observations of instructional strategies and IPEGS indicators for Instructional Delivery and Student Engagement through classroom observations. The primary data sources were used to answer each of the research questions (Table 3).

Demographic Information

This research analysis provides a review of observed patterns for instructional delivery and student engagement in selected classrooms and schools within Miami-Dade County Public Schools. The population of the cross-case analysis study was fourth and fifth grade teachers from four schools in the urban district of MDCPS. The configuration for the participating schools are as follows: School A: Grades K–8; School B: Grades Pre-K–5; School C: Grades Pre-K–5; and School D: Grades Pre-K–8. The focus grades for this study are fourth and fifth. Fourth and fifth grades were selected for this study because these grades generate multiple accountability points, including student learning gains on the Florida State Assessment. The student membership at each participating school ranged from 407 to 2143 students (Table 5). MDCPS is the fourth largest school district in the nation, and is an urban district with approximately 350, 000 students. All four schools selected for the study are within the MDCPS district.

Table 5

School Membership

School	No. Students
A	2143
B	439
C	407
D	1249

We selected our own schools for convenience and accessibility since we serve as school site administrators for the four selected schools. Although all four schools reside

within the urban district of MDCPS, each of the schools has unique characteristics that include total student membership, economic status, levels of district support (ranging from Tier 1 to Tier 3, the percent of English Language Learners, percent of Students with Disabilities, and proficiency rates according to the 2018 Florida State Assessment data (Table 2). The district-based Tiered System of Supports has been designed to provide a scaled system of support to the lowest 25% of schools based on student performance, trend analysis, and school capacity. The Tiered System was created to ensure that all schools, regardless of geographical location are provided with the appropriate levels of support to increase student achievement and sustained growth beyond one year. The level of support received varies according to the tiers; as the tiers increase the support level intensifies.

Four fourth- and fifth-grade general education teachers from each of the selected elementary and K–-8 schools were selected to participate in the study. Participating teachers were selected from those who responded to a request for study volunteers. Sixteen teachers agreed to participate in the research study and completed the approved consent form acknowledging their participation in the study (Appendix B). All volunteers were informed of the topic, intent, design of the research and the roles and responsibilities of the participants. Additionally, the participants were informed of the specific procedures for the study, including the length and focus of the observation. All volunteers were allowed to decline participation or withdraw from the study at any time during the implementation. Teachers were asked to volunteer; thus, the participant sample is also convenience based.

Fifteen of the teachers were female, and one was male. Eight teachers were observed in fourth grade and eight teachers were observed in fifth grade. Eight teachers were observed during Mathematics and eight were observed during Reading/Language Arts. Table 6 presents the demographic information of the participants.

Table 6

Participants' Background Information

	Gender		Subject		Grade Level		School Type	
	Male	Female	Math	Reading	4	5	Elementary	K-8 Center
School A	0	4	2	2	2	2	-	√
School B	0	4	2	2	2	2	√	-
School C	1	3	2	2	2	2	√	-
School D	0	4	2	2	2	2	–	√

Data Sources

The three research questions were answered through the use of observations utilizing the DCOS and IPEGS instruments. Observations were recorded in 5-minute segments using the codes established by the DCOS (Appendix D). In total, 96 segments were observed. Observations were 30 minutes each, producing six segments per classroom observation. The instructional activity codes (Appendix A) were used to identify the primary instructional activity. We documented all instructional activities within the observational period using the Instructional Activity Codes provided in the protocol. We rated each of the six cognitive levels as not evident, evident or well

represented. Two of us focused on student behaviors to rate student engagement levels while the other two observed the teacher (Appendix E). After each observation, we debriefed. During the debriefing, we discussed observable behaviors, frequency of the behaviors and any possible discrepancies within the data collected. In-depth discussions were conducted when discrepancies were noted. We compared field notes and referred to the tools used during the observation to ensure they were used as intended. The calibration phases assisted in the preparedness and the alignment of our observations prior to collecting the data. We used a 5-point Likert scale to rate teacher-directed learning and student-directed learning components. The Likert scale facilitated the collection of student engagement data during the teaching-learning process within each 5-minute interval. We also used the IPEGS evaluation tool during the classroom observations. Observations specifically focused on the IPEGS indicators for Instructional Delivery and Student Engagement. We collected data on the 12 indicators of IPEGS: Standard 4 Instructional Delivery and Student Engagement (see Appendix F). Nine of the indicators generated data for instructional personnel and the three remaining indicators provided data on student engagement, facilitating answers to the research questions of this study.

Research Question 1

To what degree and in what ways are the indicators of the MDCPS IPEGS, Instructional Delivery standards implemented in the selected fourth-and fifth-grade classrooms across four selected district schools?

IPEGS Performance Standard 4: Instructional Delivery and Engagement - aligns with the research question of this study. The indicators for IPEGS Performance Standard

4 are Knowledge of Content, Multiple Levels of Questioning, Connects Prior Knowledge, Explicit Instruction, using Literacy Strategies, using Appropriate Pace and Maximizing Instruction, Using Technology, Reinforcing Learning Goals, and Providing Feedback. The instrument utilizes ordinal data coded as 1 for developing needs, 2 for effective, and 3 for highly effective. We observed a total of 96 five-minute intervals. The results of the coded intervals are presented in Table 7.

Table 7

Distribution of IPEGS Instructional Delivery Indicators

Indicator	Developing		Effective		Highly Effective	
	f	%	*f*	%	*f*	%
Knowledge of Content	18	18.8	48	50.0	30	31.1
Levels of Questioning	24	25.0	42	43.8	30	31.3
Connects Prior Knowledge	18	18.8	54	56.3	24	25.0
Use of Technology	6	6.3	84	87.5	6	6.3
Explicit Instruction	6	6.3	60	62.5	30	31.3
Use of Literacy Strategy	6	6.3	60	62.5	30	31.3
Appropriate Pace	18	18.8	36	37.5	42	43.8
Reinforce Learning Goals	6	6.3	66	68.3	24	25.0
Provide Feedback	18	18.8	54	56.3	24	25.0

Note. IPEGS = Instructional Performance Evaluation and Growth System

The results indicate that across all observational blocks the majority of the teachers scored within the effective rating in all the IPEGS indicators with a cumulative average of 58% effective. Although the overall ratings suggest that the teachers observed were effective, there were specific indicators where the ratings fell below the effective rating. A deeper review of the data revealed that The Use of Technology was the lowest rated indicator despite the majority of the observed teachers were rated Effective and very few were rated Highly Effective. The researchers observed technology used during instruction as a tool to substitute the various instructional resources. Teachers were observed utilizing the Promethean board to project the textbook/workbook pages. Additionally, teachers played an instructional video on the focus of the lesson and theme. Teachers demonstrated how to solve mathematical problems via the Promethean board as another example of technology use as substitution. During the observed segments, there were minimal interactions noted between students and the use of technology. Although technology was used during instructional delivery, it did not transform the learning environment. The Use of Literacy Strategies and the Explicit Instruction indicators appeared to be effectively delivered at the same level. During the observation segments, teachers were observed integrating literacy strategies during math instruction. For example, students were observed circling vocabulary words and using context clues to identify word meanings within a mathematical word problem. This assisted students with dissecting the word problem and comprehending the demands of the item. In another classroom, a teacher provided students with various task cards to assist them in navigating and deepen their understanding of an independent text. This finding has practical meaning because of the complexity that exists in classrooms. Today's

classrooms are comprised of students with diverse learning needs, learning styles, and varied background knowledge. The findings support the literature reviewed highlighting the need to integrate literary strategies and explicit instruction design the delivery of instruction to address the academic needs of the learners.

Research Question 1a. *What are the frequencies and types of instructional strategies employed in the selected fourth- and fifth- grade classrooms across four selected district schools?*

In this sub-question, the researchers documented all instructional activities observed within the specified classroom observation period using a set of Instructional Activity Codes (Appendix A) provided within the protocol. Types of instructional strategies used from the protocol provided information regarding the frequency and types of instructional strategies employed. The use of descriptive statistics, frequency counts, and percentages demonstrated that out of a total of 96 observation segments, the most frequently used instructional activity was Teacher Questioning with a total of 21 counts (21.9%), followed by Learning Centers with Seat Work with a total of 16 counts (16.7%). Table 8 shows all the possible instructional strategies and indicates the frequency of all instructional activities observed. Although we observed various instructional activities during each 5-minute segment, the most prevalent activity was noted as primary instructional activity. Identifying the primary activity was crucial in determining which activity resulted in higher levels of student engagement. Note that some of the categories of instructional activities were not observed at all.

Table 8

Distribution of Primary Instructional Activities

Primary Instructional Activity	*F*	%
L—Lecture	0	—
LF—Lecture with Discussion	0	—
AB—Anchoring Activity before Lesson	3	3.1
AD—Anchoring Activity During the Lesson	0	—
CD—Class Discussion	8	8.3
GD—Small Group Discussion	0	—
TIG—Teacher Interacting with Small Group	5	5.2
LC—Learning Centers	16	16.7
PM—Problem Modeling by Teacher	12	12.5
SP—Student Presentation	4	4.2
D—Demonstration by Teacher	0	—
SR—Student Responding	12	12.5
M—Manipulatives	0	—
SWI—Seatwork Individual	6	6.3
SWG—Seat Work Group-based	2	2.1
CL—Cooperative Learning	0	—
RP—Role Playing	0	—
TIS—Teacher Interaction with Individual Student	0	—
TS—Technology used by Student	0	—
TT–Technology Used by Teacher	2	2.1
A—Assessment Activity	0	—
PO—Pull out Activity Individual/Group	0	—
Q—Questioning by Teacher	21	21.0
O—Other	4	4.2
Total	96	100.0

During this study, we observed fourth- and fifth-grade reading and math lessons. Some of the recurring practices that were observed across all lessons were learning centers, teacher modeling the problem, and teacher questioning. Overall learning centers were observed in most classrooms. Learning centers are promoted within the district as an integral part of the instructional framework. Nonetheless, it was evident that there is difference in the implementation of learning centers among the four schools. Some learning centers were differentiated according to students' needs. Others were a review of skills and other learning centers required students to work independently on a given task from whole group instruction.

Additionally, some of the reading lessons observed entailed differentiated instruction in small groups and collaborative group work. While many of the math lessons focused on teacher modeling, student demonstration and integration of technology, teachers directly led most lessons. Teachers utilized the Promethean Board to model how to dissect word problems, list procedural steps, review prerequisite skills, and model the division process. It was evident that the lessons were not conducive to students playing a more active role in their learning, at least in terms of who manages the lesson delivery. Data gathered from the DCOS revealed that the cognitive activities observed were mostly in the remember and understand stages. There were very few lessons that contained activities requiring students to function at the cognitive levels of evaluate and create. In classrooms where the teachers were rated Highly Effective, it was interesting to observe the shift in the role of the learning director, from the teacher to the student, thus, promoting student ownership of their learning. In classrooms where the teachers were rated Highly Effective, students directed more of the learning experiences.

Students were observed collaborating and problem solving cause and effect relationships. The teacher played the role of a facilitator. In another Highly Effective observational segment, the students were actively engaged in strategies such as: chunking the text to make annotations, engaged in meaningful dialogue and identified text evidence.

Research Question 2

To what degree and in what ways are the indicators of the MDCPS IPEGS, Student Engagement standards implemented in selected fourth and fifth-grade classrooms across four selected district schools?

IPEGS Performance Standard 4: Instructional Delivery and Engagement aligns with the research question of this study. This standard's indicators are aligned to the research presented in this review as it relates to engaging in Diverse Activity Structures, Higher-Order Tasks, and Authentic Learning.

Table 9 presents the results of the observations based on the IPEGS standards. The results suggest that across all observational segments the overall level of effectiveness related to the three indicators was high, with the majority of the teachers scoring at the effective rating. Although the ratings indicate that the teachers observed were effective, the Diverse Activity indicator received the highest percentage of highly effective ratings at 25%. Further review revealed that the Authentic Learning indicator received the highest effective ratings at 62.5%. and the lowest developing needs at 18.8%. An in-depth review of the data revealed that the Higher-order Learning Tasks indicator received the highest percentage of developing needs ratings at 31.3% although 50% received an effective rating or higher. The Diverse Activity Structure and The Use

of Literacy Strategies and the Higher-order Learning Tasks appeared to be delivered at the same level of effectiveness.

Table 9

Distribution of IPEGS Student Engagement Indicators

Indicator	Developing		Effective		Highly Effective	
	F	%	*F*	%	*f*	%
Diverse Activity Structures	24	25.0	48	50.0	24	25.0
Higher-Order Learning Tasks	30	31.3	48	50.0	18	18.8
Authentic Learning	18	18.8	60	62.4	18	18.8

Examples of Diverse Activity structures yielding Highly Effective ratings included classrooms which consisted of an array of activities. For example in a Math classroom, students were engaged in defining the term “multiples” and then engaged in an instructional game which entailed identifying missing factors and products. In another classroom, students were observed in a variety of activities during learning centers. Students rotated among centers that required interaction with problem and solution, author’s purpose, and independent tasks. In another classroom, students were observed rotating the classroom and collaborating using cause and effect task cards to identify possible relationships.

Higher Order Learning Tasks generated the highest percentage of the Developing rating. These classrooms entailed minimum use of varied instructional strategy leading to higher order learning tasks. For example, a teacher only integrated low level instructional

vocabulary strategies such as copying definitions from the board/text, oral discussion of the word's definition, and asking recall questions as evidence by the teacher stating, "Look at the text and define greed." In another classroom, students were directed to present on a cause and effect relationship from the text. This activity limited students' higher order thinking and real-life applications. Students were confined to the text and not able to apply the learned skills to real world situations, such as creating their own cause and effect relationships. In addition, during the presentation there was low student engagement since norms identifying a purpose for listening was not established.

Research Question 2a. *What levels of student engagement exist in selected fourth and fifth-grade classrooms across four selected district schools?*

Table 10 presents the distribution of student engagement ratings by frequency count and percentage. The ratings show that 75% of the observations indicated High Engagement. Low engagement took place only 6.3% of the times recorded across the observational segments. These findings are suggesting high levels of student engagement overall across the four selected schools. However, specific types of engagement yielding the highest levels were not determined or identified. According to the review of literature, student engagement falls under three distinct forms: behavioral, emotional, and cognitive (Fredericks et al., 2004). It is important to note, that the singular focus of the tool used for this study emphasized behavioral engagement. Therefore, these findings reveal a narrow impression of the engagement that was occurring in the classroom. Looking at engagement from only a behavioral standpoint does not provide an accurate representation of the engagement that the instructional strategies were yielding at any given time.

Table 10

Distribution of Student Engagement Ratings

Indicator	Low		Medium		High	
	f	%	*f*	%	*F*	%
Student Engagement	6	6.3	18	18.8	72	75.0

During 75% of the observations, the data collection and analysis revealed that students were highly engaged. However, there were many instances where students were simply looking at the board or at their paper and appeared engaged; however, active engagement was not determined. There was no variation in the type of engagement or level of engagement when students were listening to the teacher deliver the lesson versus when the students were engaged in a collaborative activity with their peers. In these two examples the level of student engagement was rated as high. During the observational segments where low engagement was determined, students' behavior was distracted. Some examples included students playing with their pencil or items in their desk, talking to their peers, head down on their desk, and looking around the classroom not paying attention to the teacher delivering the lesson. The tool utilized for recording limited the type of data being collected to the behaviors that we were able to observe without taking into account emotional, cognitive, or academic engagement.

Table 11 presents the distribution of learning director ratings by frequency count and percentage. The student engagement DCOS tool has five ratings categories to indicate who makes the learning decisions about the learning activities. The categories represent a range from the teacher making all decisions to the student directing all

decisions. Category 2—Teacher Directs Most Learning—was prevalent the majority of the time, indicating 51%. It is evident that the teacher largely maintained full control of the lesson in most occurrences. Category 3—The Teacher and Student Share Learning Decisions—occurred 25% of the time. The results indicated that students as directors of their own learning occurred minimally. It should be noted that teachers serving as the directors of classroom learning is common and is not necessarily a negative approach to teaching and learning. In fact, one comprehensive study that included national and regional award-winning teachers in the United States and China found that in almost all classrooms, the teacher was, in practice, observed as directing the learning. Based on the observations and follow-up teacher interviews, the researchers determine that the teacher as director of learning yielded efficiencies in the classroom with no apparent reduction in student classroom engagement and student learning (Grant et al., 2014). The data collected did not reveal any significant correlation or findings when determining the levels of engagement according to the primary instructional activity. Some data revealed that when students were directing most learning and high levels of cognitive activity were well-represented, the level of student engagement was not necessarily higher. Therefore, only moderate engagement was evident.

Table 11

Distribution of Learning Director Rating

Ratings	*f*	%
1 Teacher Directs all Learning	20	20.8
2 Teacher Directs Most Learning	49	51.0
3 Teacher and Student Share Learning Decisions	24	25.0
4 Student Directs Most Learning	3	3.1
5 Student Directs all Learning	0	—
Total	96	100.0

The teacher directing most learning can be related to the findings in question 1a. where there was no evidence of role playing or activities where students take control of their own learning. This indicates that students were not provided with the opportunity to engage in these activities where the roles would be switched from teacher acting more as a facilitator and student directing most of their learning. The majority of the observational segments included examples where the teacher was at the board leading a class discussion and students answering questions. There was also lecture with discussion where the students were engaging with the information being presented and making sense of it as the teacher was guiding the discussion. During the math lessons, problem modeling by the teacher was evident as the teacher was at the board modeling how to solve the problem while the students were following along in their seats. Questioning by the teacher was also taking place as the teacher was setting the purpose for the lesson and trying to build background knowledge and also throughout the lesson to gauge student understanding of the concepts being presented. There were some instances where

students were directing their own learning as they were engaged in an activity where they had to go from station to station in the classroom and make sense of the question being asked and then add to the information already there. During this activity the cognitive level was higher as students were applying, analyzing, evaluating, and creating.

Research Question 3

What patterns emerge related to the use of instructional strategies and associated student engagement in selected fourth- and fifth-grade classrooms across four selected district schools?

The Spearman rank-order (Spearman rho) correlation coefficient was used to assess the strength of the relationship among the nine Instructional Delivery indicators of IPEGS. According to the Spearman rho calculations a moderate to high correlation existed among all nine Instructional Delivery indicators (Table 12). The correlation coefficients among the indicators ranged between .440 and .881.

Table 12

Correlations Between the Nine IPEGS Instructional Delivery Indicators (N = 96)

Indicators	Knowledge of Content	Levels of Questioning	Connects Prior	Explicit Instruction	Use of Literacy	Appropriate Pace	Use of Tech	Reinforce Learning	Provide Feedback
Knowledge of Content	—	.582	.661	.543	.726	.791	.502	.804	.661
Levels of Questioning	.582	—	.629	.550	.716	.727	.472	.603	.881
Connects Prior Knowledge	.661	.629	—	.440	.628	.487	.535	.687	.582
Explicit Instruction	.543	.550	.440	—	.545	.760	.584	.652	.440
Use of Literacy Strategy	.726	.716	.628	.545	—	.760	.584	.652	.628
Appropriate Pace	.791	.727	.487	.760	.760	—	.455	.678	.679
Use of Tech	.502	.472	.535	.584	.584	.455	—	.636	.535
Reinforce Learning Goals	.804	.603	.687	.652	.652	.678	.636	—	.687
Provide Feedback	.661	.881	.582	.440	.628	.679	.535	.687	—

Note. The instructional delivery indicator data were treated as ordinal. IPEGS = Instructional Performance Evaluation Growth System. All values are $p < .001$, two-tailed

Explicit Instruction correlated with Connecting to Prior Knowledge and Providing Feedback moderately, $r(96) = .440$, $p < .001$. Meanwhile, there was a large significant association between Providing Feedback and Levels of Questioning, $r = .881$, $n = 96$, $p < .001$. During the observations, it was evident that teachers which engaged the learners in high order thinking questions provided immediate feedback. The teacher would ask students why questions, such as "Why do you believe that is the theme of the text?" The teacher would break questions apart to have students think critically. These teachers would provide feedback that would guide the students through the thinking process to reach a possible answer. Furthermore, large positive relationships were observed between Knowledge of Content and Use of Technology, $r(96) = .726$, $p < .001$, $r(96) = .791$, $p < .001$; and Appropriate Pacing and Reinforcing Learning Goals, $r(96) = .804$, $p < .001$. Levels of Questioning demonstrated a significant association with the use of Literacy Strategies, $r(96) = .716$, $p < .001$. Appropriate Instructional Pacing, $r(96) = .727$, $p < .001$, and Providing Feedback, $r(96) = .881$, $p < .001$. Appropriately pacing during instructional delivery revealed a strong correlation with Knowledge of Content, $r(96) = .791$, $p < .001$, Levels of Questioning, $r(96) = .727$, $p < .001$, Explicit Instruction, and Use of Literacy Strategies, $r(96) = .760$, $p < .001$. This correlation was evident during some observational segments. During the observations, the teachers that demonstrated strong content knowledge where able to appropriately pace the lesson, provided explicit instruction and keep the students engaged. During one of the observed reading classes, it was evident that the teacher had a strong content knowledge. The instructional delivery had a sequential order to it with smooth transitions. The teacher anchored the lesson by setting a purpose, asked guided questions to support student learning, provided explicit instruction on the

focus skill and then released students to discuss within the first 15 minutes of the lesson. After whole group instruction, the students transitioned to differentiated small-group instruction with minimal loss of instructional time. It was evident that the teacher had a command of the content and could effectively deliver the content to students to maximize student learning and offer students diverse learning opportunities. In addition, two set of indicators yielded exact results with other indicators. Explicit Instruction and Use of Literacy Strategies generated equivalent positive correlations data with Appropriate Pace, Use of Technology and Reinforce Learning Goals, $r(96) = .760$, $p < .001$; $r(96) = .584$, $p < .001$; $r(96) = .652$), respectively. Additionally, there were two other variables that produced identical moderate levels of association with five other Instructional Delivery indicators. Connects Prior Knowledge and Provide Feedback generated equivalent correlational data with Knowledge of Content, $r(96) = .661$, $p < .001$, Explicit Instruction, $r(96) = .440$, $p < .001$, Use of Literacy Strategy, $r(96) = .628$, $p < .001$, Use of Technology, $r(96) = .535$, $p < .001$, and Reinforce Learning Goals, $r(96) = .687$, $p < .001$. Therefore, these indicators are not independent of each other, it can be assumed that a non-causal relationship exist among all nine indicators.

Table 13

Correlations Between Student Engagement and the Nine IPEGS Instructional Delivery Indicators (N = 96)

Pearson Correlation	Knowledge of Content	Levels of Questioning	Connects Prior	Explicit Instruction	Use of Literacy	Appropriate Pace	Use of Tech	Reinforce Learning	Provide Feedback
Student Engagement	.320	.261	.256	.470	.384	.345	.447	.303	.258

Note. The instructional delivery indicator data were treated as ordinal. IPEGS = Instructional Evaluation Performance Growth System. All values are $p < .01$

The Spearman rank-order (Spearman rho) correlation coefficient was computed to assess the relationship between student engagement and the nine IPEGS Instructional Delivery indicators. Table 13 highlights the associations between the student engagement and the indicators. The results indicated that there were varying degrees of correlation among the variables. There was a low correlation between Student Engagement to Levels of Questioning and Connecting to Prior Knowledge, $r(96) = .261$, $p < .001$) and $r(96) = .256$, $p < .001$, respectively. Knowledge of Content, Appropriate Instructional Pacing, Reinforcing Learning Goals, and Use of Literacy Strategies exhibited low to moderate levels of association to Student Engagement, ranging from $r(96) = .320$, $p < .001$ to $r(96) = .384$, $p < .001$. The data also demonstrated a moderate correspondence between Student Engagement and Explicit Instruction, $r(96) = .470$, $p < .001$. Furthermore, the data also reflects that students were engaged when technology was being used during instruction, $r(96) = .447$, $p < .001$. These various degrees of correlation indicate that a causal relationship between student engagement and the IPEGS Instructional Delivery indicators can be assumed.

Table 14

Correlations Between the Three IPEGS Student Engagement Indicators (N = 96)

Indicators	Diverse Activity	High Order Learning Task	Authentic Learning
Diverse Activity	—	.889**	.722**
Higher-Order Learning Tasks	.889**	—	.880**
Authentic Learning	.722**	.880**	—

**p < .001

Table 14 presents the Pearson Product Moment correlations among the three variables of the IPEGS Student Engagement indicators; Diverse Activity, Higher-Order Learning Tasks and Authentic Learning. Notable high correlations exist between all three variables. There was a significant correlation between Higher-Order Thinking Learning Tasks and Diverse Activities, $r(96) = .889$, $p < .001$. Additionally, a high correspondence exists between Higher-Order Learning Tasks and Authentic Learning, $r(96) = .880$, $p < .001$. Authentic Learning and Diverse Activity were strongly associated, $r(96) = .722$, $p < .001$. Very high correlations that exists among all three IPEGS Student Engagement indicators suggests that there is no distinction among the variables, at least in terms of the way the research team documented the existence of the IPEGS indicators.

Table 15

Correlations Between Student Engagement and Three IPEGS Student Engagement Indicators (N = 96)

Pearson Product Correlation	Student Engagement	P
Diverse Activity	.278	.006
Higher-Order Learning Tasks	.231	.038
Authentic Learning	.292	.004*

*p <.05

A Pearson Product Moment correlation was calculated to assess the relationship between student engagement and the three IPEGS Student Engagement indicators. The results in Table 15 demonstrated a low correlation between student engagement and all three indicators, Diverse Activity, High-Order Learning Tasks, Authentic Learning. There was a weak association between student engagement and High-Order Learning Tasks, $r(96) = .212$, $p < .038$. Furthermore, student engagement and Diverse Activity reflect a poor relationship, $r(96) = .278$, $p < .006$. Student engagement and Authentic Learning display a low correspondence, $r(96) = .292$, $p < .004$. The significant correlation that exists between student engagement and all three IPEGS Student Engagement indicators were small or weak.

Because there is very little variability, the correlations between student engagement and other variables, such as the instructional strategies observed, yielded low

correlations. During the observed segments, behavioral engagement was the focus of the data collection. However, behavioral engagement does not encompass all other factors that are associated with student tenement levels in the classroom therefore, this suggests that because there isn't enough variability in the measure of engagement there is a need to have a more refined view and measure of engagement for future studies.

Summary of Findings

This mixed-methods comparative analysis study explored the relationship between student engagement and instructional delivery and its connection to student achievement. The investigation of methods used for teaching is essential to attain a better understanding of what effective teachers do in the classroom. The teachers that participated in this study demonstrated high levels of competence related to the qualities of effective teachers identified in *What is the Relationship between Quality and Student Achievement? An Exploratory Study* conducted by Stronge et al. (2007). The 16 teachers shared several similarities in their teaching practices. Observations provided clear correlations between High-Order Learning Tasks and Authentic Learning as well as Explicit Instruction with Connecting to Prior Knowledge and Providing Feedback.

Additionally, there was a significant association between Providing Feedback and Levels of Questioning. Within the 96 observational periods, Levels of Questioning demonstrated a strong association with the Use of Literacy Strategies, Appropriate Instructional Pacing, and Providing Feedback. Appropriately Pacing during instructional delivery revealed a strong correlation with the instructor's Knowledge of Content. The teachers used a variety of instructional strategies. There was a preponderance of evidence indicating that the majority of the lessons observed were conducted through Explicit

Instruction; The teacher-directed most learning activities. Furthermore, student engagement in association to the Instructional Delivery indicators shared varied degrees of association while compared to the Student Engagement indicators which yielded weak correlations.

CHAPTER 5

RECOMMENDATIONS

Chapter 5 considers the implications of this study's findings aligned with the research questions. The chapter begins with a discussion of the findings, followed by an in-depth analysis of the implications and recommendations that may impact policy and practice as they relate to instructional delivery and student engagement.

Discussion of Findings

The study utilized a mixed-methods, comparative case analysis to examine the relationship between instructional delivery, student engagement and student achievement in Miami-Dade County Public Schools (MDCPS), the fourth largest school district in the United States. The purpose of this study was to determine if similarities and/or differences exist between instructional delivery and the levels of student engagement across four schools. The conclusions were drawn from the findings of this study, as outlined in Chapter 4, and the literature reviewed in Chapter 2. The conclusions of this chapter both favor and negate formerly selected studies concerning instructional delivery and student engagement. Three research questions drove the study from the planning stages through implementation, collection of data, analysis, and determinations conclusions about the data. After a review of the literature and observation of the results, the following findings and recommendations for practice are provided.

Correlations among IPEGS Instructional Delivery Indicators

Research suggests that numerous elements of effective teaching are linked to a teacher's repertoire of teaching practices (Stronge, 2018). Therefore, it is critical to identify relationships among instructional delivery indicators and how their interrelatedness affects classroom instruction. These correlations are valuable as a means of providing teachers with a blueprint of effective research-based practices and their role in student learning.

A wide variety of instructional strategies were found to be prevalent in the research findings, with all 16 teacher participants used numerous instructional strategies throughout their lessons. Of all the instructional strategies employed, the primary instructional activity used was teacher questioning. The multiple levels of the IPEGS questioning indicator had a total of 24 developing needs ratings, 42 effective ratings, and 30 highly effective ratings. The distribution of levels of questioning ratings indicates an effective rating with 43.8%. Stronge (2018) proposed that high-quality teachers promote complex and higher-order thinking using high-quality questioning to engage students in learning. This study exemplifies that relationships that exist among Stronge's Qualities of Effective Teaching Instructional Delivery indicators. According to the Spearman rho calculations as presented in Chapter 4, a moderate to high correlation existed between all nine Instructional Delivery indicators. Additionally, there was evidence that all Instructional Delivery indicators were regularly implemented throughout the four schools in an effective manner.

Explicit instruction. This study highlights the strong relationships which can be a testament to the importance of the instructional delivery that includes selected principles

of Direct Instruction. According to Joyce, Weil, and Calhoun (2004) direct instruction aims to advance student learning through explicit instruction, ongoing support and assessment, and reinforcement. Defining features of direct instruction include: (a) a focus on academic tasks and learning; (b) a high degree of teacher direction and control of the learning process; (c) high expectations for student progress; (d) continuous instant feedback; and (e) brisk pacing where every minute counts (Joyce et al., 2004). Xu (2020) noted that there are many forms of direct instruction, but they all typically involve three major steps:

> (a) Introduction: The teacher clearly identifies the learning intentions and student expectations, reviews previous learning, and quickly assesses students' readiness for the new learning;
>
> (b) Presentation: The teacher explains and demonstrates the new learning, for instance, through modeling or using examples and non-examples; and
>
> (c) Practice: The teacher provides opportunities for students to practice the new learning, initially with the teacher's help, and then the teacher gradually releases support so that students can practice independently and even transfer the learning to new settings. (p. 1)

When using direct instruction, it is more effective when it is deliberate, explicit, and with gradual steps (Xu, 2020). The Explicit Instruction indicator may be described as an approach used by teachers to explain, model, and demonstrate content to students while infusing student engagement strategies. Additionally, explicit instruction changes the role of the learning director throughout the lesson, from teacher-centered to student-centered. Explicit instruction provides support through scaffolding in a logical and

sequential manner in order to address students' academic needs (Archer & Hughes, 2011). In this study, Explicit Instruction correlated with Connecting to Prior Knowledge and Providing Feedback moderately, $r(96) = .440$, $p < .001$. Meta-analyses and comprehensive reviews of the extant literature suggests that Explicit Instruction has a successful outcome when it is coupled with a variety of other strategies (Hattie, 2009; Stronge 2018). These reviews highlight the power of stating the learning intentions and success criteria prior to engaging the students. This is evident in this study's data in which Explicit Instruction and Reinforcing Learning Goals yielded a correlation of $r(96) = .652$, $p < .001$, a stronger association than other factors such as Connection to Prior Knowledge and Providing Feedback. Hattie (2009) emphasized the importance of inviting students to learn and allowing multiple opportunities for practice, modeling, and feedback.

Explicit Instruction shared a moderate relationship with the Use of Technology, $r(96) = .584$, $p < .001$. Al-Shammari, Aqeel, Faulkner, and Ansari (2012) demonstrated an increase in student learning when direct instruction is paired with integration of technology. Appropriate Pacing demonstrated the strongest correlation with Explicit Instruction, $r(96) = .760$, $p < .001$. Additionally, the appropriately pacing of a lesson, presenting concepts in small steps, providing guided practice, checking for understanding and engaging the learners contribute to the strong association between the variable of Explicit Instruction.

Explicit Instruction and the Use of Literacy Strategies shared the exact positive correlation with Appropriate Pace, $r(96) = .760$, $p < .001$, Use of Technology, $r(96) = .584$, $p < .001$, and Reinforce Learning Goals, $r(96) = .652$, $p < .001$. These results may

be attributed to the importance previously mentioned that Explicit Instruction is more effective when coupled with other strategies. Research states that explicit content literacy strategies are critical to supporting student success (Fenty & Brydon, 2017). Fenty and Brydon (2017) highlight a research that explored the use of literacy strategies during science instruction. This study outlined the importance of integrating differentiated literacy strategies during core instruction since not all students benefited from the same literacy strategy (Fenty & Brydon, 2007). Integrating literacy strategies during instruction offers students the opportunity to develop an understanding for content-based vocabulary, text structure and text features to support learning across all disciplines.

Questioning/providing feedback. Levels of Questioning and Provide Feedback were the two variables that yielded the strongest correlation in this study, $r(96) = .881$, $p < .001$. This positive relationship is aligned to research on the effectiveness of questioning and positive feedback (Harbour et al., 2015; Hattie & Timperley, 2007; Kern & Clemens, 2007). These variables have been described as important and influential practices in the classroom (Stronge, 2018). Questioning encourages learners to think critically, become involved with their learning and provides teachers with an insight on the instructional modifications necessary. Feedback has been described as one of the most powerful influences in student achievement (Hattie, 2009). According to Hattie (2009), questioning has an effect size of $d = .46$ while feedback has an effect size of $d = .73$. A strategy that produces positive effects on student performance is the opportunity to respond (Harbour et al., 2015; Kern & Clemens, 2007). Harbour et al. (2015) highlights research conducted by Ferkis, Belfiore, and Skinner which states when students are engaged in responding to questioning they have the opportunity to engage with instruction and receive immediate

feedback. Sutherland, Alder, and Gunter (2003) demonstrated that various opportunities to respond to questioning yielded positive effects, including high levels of engagement.

Providing feedback is essential in assisting the student with opportunities to link positively the various ways their attained knowledge (Hattie & Timperley, 2007). Feedback is highly influential in successful, effective learning strategies and has been boiled down to an effective framework easily applied in the classroom level consisting of three questions: (a) What are the goals? (b) What progress is being made towards the goal? and (c) What activities need to be adopted to make progress? (Hattie & Timperley, 2007). The research revealed that highly effective teacher performance was consistent in four indicators of IPEGS which correlate to real-time strategies in the classroom, which are Knowledge of Content, Levels of Questioning, Explicit Instruction and Literacy Strategy. The highly effective teacher proficiency was 31% in these indicators. However, in providing Feedback, the Highly Effective teacher proficiency was only 25%. Although statistically, this measure is not significant, the data lend itself to show that Highly Effective teacher aptitudes can further be researched to determine their abilities as highly effective teachers within specific indicators of IPEGS. Accordingly, a quantitative study to examine the proper implementation of Feedback in the classroom among highly effective teachers could reveal valuable data as it relates to student engagement and performance in classroom settings where highly effective teachers are instructing them.

Feedback is one of the most effective and influential strategies to improve student achievement (Harbour et al., 2015; Hattie & Timperley, 2007). Feedback impacts student learning: “Feedback is a critical aspect of the learning process for students” (Harbour et al., 2015, p. 9). Hattie and Timperley (2007) noted feedback as one of the most influential

elements on student learning. Several studies revealed that a teachers' utilization of positive feedback in their classroom results in significantly engaged students (Apter et al. 2010; Harbour et al., 2015). Harbour et al (2015) states positive feedback should immediately proceed students' responses to have the strongest effects. These studies support the strong association yielded in this study between Levels of Questioning and Providing Feedback.

Connecting to prior knowledge. Connecting to Prior Knowledge was another variable that positively interacted with other variables and yielded identical results as Providing Feedback. As already discussed, Providing Feedback is one of the most powerful practices during instructional delivery. Connecting to Prior Knowledge also plays a vital role in student learning. Campbell and Campbell (2009) explained the benefit as taking time to understand what is known or believed about a given topic. In addition, substantial research confirms the key role that prior knowledge plays in a learners' academic performance (Campbell & Campbell, 2009). Meta-analyses demonstrate that asking students questions prior to reading about key concepts or clarifying before presenting the content raises student achievement (Campbell & Campbell, 2009). As a result, activating and building on prior knowledge sets the purpose and provides students with frames of reference for the lesson and providing effective positive feedback ensures supporting the learner through the learning process.

Correlations Among Student Engagement and IPEGS Instructional Delivery Indicators

The Pearson Product Moment Correlation (Pearson r) was computed to assess the relationship between student engagement and the nine IPEGS Instructional Delivery indicators.

Levels of questioning. The results indicate that across all observation periods, on average, teachers were effective in all components of IPEGS indicators for performance delivery with an average rating of 68% effective. However, a more in-depth review of the results suggests opportunities for improvement among all levels of educators. Kern and Clemens (2007) state that Opportunities for Students to Respond (OTR) are essential for students to respond actively to lesson tasks, for providing students an opportunity to respond actively, for promoting student engagement, for encouraging student autonomy, and for prompting student discussion to ascertain levels of student mastery in a subject. Further, in Marzano et al. (2011) state that the type of emotional response to a lesson could affect the level of student engagement. These concerns can be easily recognized through the effectiveness of Levels of Questioning implemented in the classroom by educators. Although from a statistical point of view in our study, the observations revealed that the teachers were overall effective in employing the IPEGS indicators as they pertain specifically to Levels of Questions, the data suggest that there were sufficient differences to warrant further research.

It is evident that even though observation segments were rated Effective overall, a deeper analysis of the data indicated that there were instances of observed segments that were classified as Developing/Need Improvement. A range existed between 6% to 24%

of the observed segments receiving a Developing/Needs Improvement rating based on the classroom observations. Of the observed segments, 6% yielded a Developing/Needs Improvement rating when the following indicators: Explicit Instruction, Literacy Strategies, Use of Technology, and Reinforce Learning Goals, were infused in the instructional delivery while 18% percent of the observed segments indicated a Developing/Needs Improvement rating when Knowledge of Content, Connect Prior Knowledge, Pace, and Provide Feedback were implemented during instructional delivery. Levels of Questioning indicator generated 25% of observed segments as Developing/Needs Improvement. It is noteworthy that Levels of Questioning was the only indicator where teachers needing improvement varied in their performance. Implying the lack of effective planning, knowledge on the subject matter, asking questions at the appropriate time, and making adjustments during instruction (Stronge, 2018).

There were low correlations between student engagement and Levels of Questioning, $r(96) = .284$, $p < .004$, and Connecting to Prior Knowledge, $r(96) = .295$, $p < .005$, respectively. The low correlations highlighted in this study between Levels of Questioning and Student Engagement can be attributed to various factors, such as teachers' lack of content knowledge, ineffective questioning techniques, the amount and type of questions posed to students, and the cognitive level of the questions. Questioning was described by Hattie (2009) as having an effect size of $d = .46$, minimally in the zone of desired effects. An interesting point to consider is that so much of classroom time is devoted to questioning by teachers that this may deter student engagement. Teachers ask 300 to 400 questions a day, 50 within a class period (Hattie, 2009; Stronge 2018). The

quality of the questions posed is another important aspect that may affect student engagement. Thus, one key point is clear: It is important to use questioning appropriately. "Questioning can sometimes be used ineffectively" (Stronge, 2018, p. 107). Stronge (2018) states how teachers usually select the same students to respond to questions, and this prevents others from becoming engaged. Additionally, the majority of questions posed to students are either open-ended, recall or procedural in nature (Hattie 2009; Stronge, 2018). Questions are usually recall, remember, and understand questions. Although teachers were asking questions of the students and engaging them in class discussions, the questions that were being asked were at very low complexity levels. The majority of the questions asked were low recalling information and understanding the meaning. During one of the observations, the questions were mainly focusing on identifying a formula to a math problem and stating the next step as the teacher modeled the problem. Another example of low level questioning included questions pertaining to naming the characters, where did the setting take place, finding the answer in the text. Although there is a place for these types of questioning, there was no evidence of the teacher scaffolding the students to be able to apply or analyze any of the information being presented. A difference between an effective and ineffective teacher is that effective teachers ask seven times higher cognitive level questions in class than an ineffective teachers (Hattie, 2009; Stronge, et al., 2007). Stronge (2018) also suggests that teachers miss the opportunity to probe and scaffold learning with students when questioning.

Connecting to prior knowledge. The low correlation between Connecting Prior Knowledge and Student Engagement found in the study may be a result of the students'

limited background knowledge. A student with limited vocabulary or knowledge on a specific topic tends to shy away from engaging in the discussion or answering questions. Studies demonstrated that students may possess half of the vocabulary knowledge when compared to their peers (Campbell & Campbell, 2009). Low student engagement may be attributed to a learning gap. Lack of student engagement also can be attributed to the knowledge gap that may exist in students' learning and the ineffectiveness of questioning students.

The teacher's ability to help students make these connections with the text or content is critical. A teacher's subject matter knowledge is a factor that affects how students connect to prior knowledge. A teacher who lacks sufficient and pre-requisite knowledge on the subject matter may not address all the multiple sides of the concepts or text. The teacher may also have challenges in responding to students' questions on the subject matter. Additionally, a teacher that lacks subject matter knowledge may not expose the student to the necessary pre-requisite vocabulary or skills. These teachers may not create opportunities and offer students a framework to build on their current knowledge. Teachers' ability and experience with teaching reading strategies explicitly and effectively is also another essential factor. Connecting to prior knowledge does not only take place at the beginning of the lesson. A teacher must have the skill set to teach comprehension strategies throughout the entire lesson, beginning, during, and at the end. Teachers should have the ability to model for students the thinking process. It is essential to expose students to metacognition skills.

Another critical factor to consider is the teacher's knowledge of the learners. The teachers need to know what students already know about the subject matter, text, or

content. This is critical since students come to the classroom with their knowledge, conceptual understanding, pre-requisite skills, and cultural beliefs, and these are factors that affect how a student may connect to the knowledge presented by the teacher. Teachers must understand what students think to help them connect and engage with the lesson. Using class discussions can be misleading for some students in making appropriate connections since their knowledge varies. The more a teacher understands and knows the students and the subject matter, the higher the opportunity for the students to connect and become engaged.

Explicit instruction and use of technology. This study revealed a moderate correlation between Explicit Instruction and Use of Technology to Student Engagement. These two variables go hand in hand as they are vehicles of delivering instruction. The appropriate implementation of Explicit Instruction may be the factor that generates moderate levels of association to Student Engagement. The meta-analyses on Direct Instruction outlines the importance of stating the learning intentions and success criteria and then engaging the student toward the goal (Hattie, 2009). Setting the purpose from the beginning of the lesson hooks the student. Furthermore, research has demonstrated the effectiveness of Direct Instruction with low performing students, with effect sizes ranging from .50 to .99 (Hattie, 2009). These are indicators that all students can have higher levels of engagement. Harbour et al. (2015) stated that research reveals that modeling fosters student engagement and academic performance, resulting in an increase in self-regulatory behaviors and higher order thinking skills. Meanwhile, the Use of Technology also yielded a moderate correlation to Student Engagement. These findings may be attributed to the ways technology is used during instruction. According to

research noted by Hattie (2009) and Stronge (2018), integration of technology can increase a student's learning by 12 to 16 percentage points MDCPS's digital convergence initiative was launched in 2014, and it began our district's transition to a technology-enhanced learning environment (Rabinovich, 2020). The implementation of digital educational resources coupled with multiple forms of computer-based assessments was the basis for creating a blended learning classroom environment using technology. Initially equipping students with devices and developing digital content for assignments to enhance traditional instructional practices and ultimately shifting the district's vision to use blended learning moving instruction towards technology integration. However, since the Use of Technology is dependent on the teacher's technological skills, how it is implemented in the classroom is dependent on the teacher's technological proficiency and comfort level. Although the technology was used during the observation segments, the observed teachers only enhanced the use of technology by digitizing conventional teaching and learning practices. The selected teachers all used technological tools such as interactive boards, laptops, desktops computers, digital applications to facilitate instruction enhancing instruction but not yet transforming the learning or creating a personalized environment. Many of the teachers observed substituted technology devices such as laptops as they would have used a textbook or the interactive board as an overhead projector, for example. While others augmented the learning by using the devices to help learners consume information by computing math problems using the interactive board, remediate skills for deficient readers, or provide feedback using applications such as ClassDojo.

Correlations among the IPEGS Student Engagement Indicators

Striking correlations exist among the three variables of the IPEGS Student Engagement indicators: Diverse Activity, Higher Order Learning Tasks, and Authentic Learning. The Pearson Product Moment Correlation (Pearson r) analysis indicated a very strong association among all three indicators. A study noted that effective teachers use nine or more instructional (diverse) activities in a lesson (Grant et al., 2013). The results of this exemplify the importance of high-interest lessons to engage students.

Student engagement is aligned to quality instruction, complex activities, and higher-order thinking tasks. Studies demonstrate that effective teachers match students to thought-provoking tasks and are persistent in challenging and engaging learners throughout the entire lesson (Strati, Schmidt, & Maier, 2017; Stronge, 2018). Additionally, Stronge (2018) mentions research that emphasizes the role that authentic and everyday context play in student engagement. Student engagement increases when students find the lesson meaningful.

Correlations Among Student Engagement and IPEGS Student Engagement Indicators

A Pearson Product Moment correlation was calculated to assess the relationship between student engagement and the IPEGS Student Engagement indicators. The following data demonstrated low correlations between student engagement and the indicators, Diverse Activity, High Order Learning Tasks, Authentic Learning. The results of this study contradict previously mentioned research pertaining to the association between student engagement with diverse activities, higher order learning tasks, and authentic learning. The insignificant correlation that exists between student engagement

and the IPEGS Student Engagement indicators demonstrate that there is no distinction among the variables. Research states that effective teachers employ a variety of teaching practices to keep students focused and engaged while having a substantial effect on student achievement (Stronge, 2018). Researchers also state that the highly engaged classroom encompasses challenging tasks, relevant activities, frequent feedback, and positive attention to students (Stronge, 2018). The results of this current study differ from what research studies. This discrepancy raises the question about factors that affect student engagement, such as students' emotional engagement with the classroom teacher and instruction, teacher's lack of learner knowledge, and students' lack of ownership of the learning.

The results of the study suggest that the average rating received for the three indicators under Student Engagement was effective. However, the findings revealed that the Higher Order Learning Tasks indicator received the most developing needs/improvement ratings among the three indicators under Student Engagement. Student engagement in the classroom has been studied and defined by numerous researchers with research highlighting that student engagement and its relationship to students' learning are essential to academic achievement (Stronge, 2006). Clearly, student engagement and student success continue to be at the forefront of improvement initiatives and of continuous interest to stakeholders. Research conducted by Astin (1984) indicated that learning is closely related to the quality and quantity of student involvement within a context and how the effectiveness of any program is related to the ability of that activity or program to increase or maintain student involvement. The teachers in this study were not able to deliver the Student Engagement indicator as it

relates to Higher-Order Thinking in a Highly Effective manner. The results of this study were inconclusive in determining which instructional strategies significantly engaged students as the median rating was Effective amongst the teachers across the four schools. Furthermore, this study revealed that a low to moderate causal relationship exists between the IPEGS Instructional Delivery standards and Student Engagement.

Specific Levels of Student Engagement

Ratings of L-Low Engagement, M-Moderate Engagement, to H-High Engagement were utilized to determine the levels of engagement present during the intervals. The results indicated varied levels of student engagement in the observed segments. Low student engagement was evident during 6% of the observed segments, while moderate and high student engagement were observed 18% and 75% of the observed segments, respectively. This suggests there was a high level of student engagement across the four selected schools, with 75% of the recorded observations receiving a rating of High Engagement. Marzano et al. (2011) indicated that student engagement does not just randomly occur, but is the result of careful planning by a teacher and encouraged using specific strategies to generate desired responses from students. Although the findings indicated that there were high levels of student engagement during 75% of the observation segments, this study only looked at behavioral engagement. This narrow focus prevented the researchers from obtaining data that truly identifies engagement leading to understanding. As a result of only focusing on behavioral engagement, it was difficult to determine if a student was actually engaged or if there was active engagement. During the observational segments, students who were simply staring at their teacher were rated as highly engaged. Therefore, it is important to

note that in order to determine active engagement in academic tasks at a non-superficial level, other types of student engagements need to be investigated.

Implications for Policy and Practice

The collection and evaluation of the data during this study resulted in findings used to satisfy the purposes of this study. The Instructional Delivery and Engagement IPEGS Performance Standard 4 indicators were utilized to determine their implementation as it relates to knowledge of content, multiple levels of questioning, connection of prior knowledge, explicit instruction, utilization of literacy strategies, appropriate pace and maximization of instruction, use of technology, reinforcement learning goals and provision of feedback. Stronge (2006) suggests instructional delivery refers to a teacher's use of varied research-based instructional strategies utilized to engage students in active learning. There is strong evidence to support the existence of quality instructional delivery across the four schools in this study. The results were that all instructional delivery indicators were implemented among the different schools in an effective manner. The findings of this study demonstrate that there are common aspects of instructional delivery that engage students in learning. Table 16 summarizes findings and recommendations.

Professional Development Recommendations

There is no measurable difference among the four schools in the effectiveness of the teachers. This effective rating in all four schools indicates that the principles outlined in the IPEGS evaluation system are valid regardless of the setting. Effective teachers play a pivotal role in students' lives; therefore, it is important to continue offering professional growth activities to build the capacity and repertoire of teachers as described by Stronge

(2018) in *Qualities of Effective Teachers*. Professional development for teachers is in keeping with the philosophy that planning and preparation will lead to an increase in student engagement (Marzano, 2013).

Although there was no measurable difference in the effectiveness of the teachers, it is recommended that professional development be more intentional and specific for maximum impact so that it meets both the individual development needs and the school district's needs. The professional development of a teacher is the professional growth that he/she acquires as a result of experience and systematic analysis of their own practice and through participation in training activities. Just as a teacher has to create conditions that support and encourage student success, school districts have to support teachers' professional development. Currently, MDCPS offers professional development that is comprehensive and designed to improve educator's effectiveness in raising student achievement. However, it was evident during our observations, that there is a need to provide a variety of intentional professional development opportunities based on the specific needs of the school.

Conducting differentiated instruction in the classroom was an example of a strategy that varied depending on the school. We observed differentiated instruction in a school with Tier 1 supports where the teacher had the students working in small groups and all groups working on different activities such as silent reading, completing technology lessons, and completing writing tasks. In the school with Tier 3 supports, the differentiated instruction involved students working on specific standards based on need and there was evidence of tracking their performance through on-going progress monitoring. The teachers from the Tier 1 school would benefit from attending additional

professional development in the area of differentiated instruction. Although Tier 1 schools have a high percentage of students achieving proficiency, improving the execution of differentiated instruction can assist with the increase of students making learning gains as well as increasing the performance of the students in the lowest quartile.

Teachers would benefit from professional development with an emphasis on scaffolding strategies as a means of assisting students to connect prior knowledge to instructional content. Instructional scaffolding is the support process given to students during the instruction to meet their individual needs as a tool to strengthen their understanding with the ultimate goal of engaging students in the lesson. Providing scaffolding is an essential component in teaching new tasks with multiple steps. Therefore, scaffolding plays a critical role in classrooms as it meets students at their ability level and guides them through the instructional process. During our observations, there was minimal evidence of scaffolding or teachers providing real world experiences to assist students to connect prior knowledge. Teachers provided examples as opposed to soliciting examples from students.

Table 16

Findings and Related Recommendations

RQ#	Findings	Related Recommendations
1	There was evidence that all instructional delivery indicators were consistently implemented throughout the four schools in an effective manner.	Provide professional development to teachers on the implementation of the IPEGS indicators in the classroom. Observation effectiveness: Ensure administrators are adequately trained and capable of performing meaningful observations. Ensure administrators provide teachers with on-going timely and effective feedback that focuses on the framework for effective instruction indicators. Provide professional development to both administrators and teachers on the framework of effective instruction indicators. Provide a variety of intentional professional development opportunities based on the specific needs of a school. Continue research into the Frameworks of Effective Instruction.
1a	Teacher Questioning was the primary instructional activity employed by all 16 teacher participants observed.	Provide professional development for educators to identify levels of questions posed in classrooms properly. Provide professional development for performance indicators in the area of the use of technology in the classroom.
2	There was evidence that all student achievement indicators were consistently implemented throughout the four schools in an effective manner.	Continue implementation of strategies that address Student Engagement indicators during instruction.

	The indicator, Higher-Order Learning tasks, under the Student Engagement Standard received the most developing needs/improvement ratings.	Provide professional development to teachers on planning and delivering lessons that engage students in higher-order thinking.
	Student engagement was high 75% of the time across the four targeted schools.	Research additional observational tools that clearly define and include the various types of engagement to determine which types of engagement yield higher levels.
3	Explicit Instruction and the Use of Literacy Strategies shared the exact positive correlations ($r(96)=.760$, $p<.001$), with Appropriate Pace, Use of Technology, and Reinforce Learning Goals.	Research shows Explicit Instruction as highly effective with low performing students, with effect sizes ranging from .50 to .99 (Hattie, 2009). This teaching practice can produce high levels of engagement for all students regardless of their academic abilities. School districts should consider adopting the elements of explicit/direct instruction in their instructional pacing guides. It is imperative that the pacing of the lessons is appropriate, concepts are presented in small steps, guided practice is provided, checks are made for students' understanding, and the instruction engages the learners. These guides should infuse literacy strategies, technology, inquiry-based learning, and problem-solving in order to strengthen the effectiveness of instructional delivery.
	A low correlation was calculated between Connecting Prior Knowledge and Student Engagement.	Provide professional development on scaffolding strategies to reduce learning gaps among students with limited background knowledge.

Students engage in lessons that require higher order thinking skills; therefore, teachers would benefit from professional development in this area especially since the Higher-order Learning Tasks indicator received the highest percentage of developing needs ratings at 31.3%. Integrating higher-order tasks in a classroom benefits the engagement in a classroom. “The more a teacher can tap into students’ higher-level goals, the more engaged the class as a whole will be” (Marzano et al., 2011, p. 12). It is important to engage students in cognitively challenging activities throughout the learning process not only as a means of engaging them but to assist them in understanding the instructional content better.

Accuracy and Value of Classroom Observations

Observations performed by school administrators must continue to focus on the IPEGS indicators and the effectiveness in which teachers are implementing them at the classroom level to ensure educator variations of IPEGS does not occur. Evaluators must be well equipped and proficient at securing the data gathered during observations in order to determine an accurate rating for the effectiveness of teachers (Stronge & Tucker, 2003). It was alarming to find that as the data were analyzed, the percent of Developing Needs ratings in the areas of Knowledge of Content, Levels of Questioning, Connects Prior Knowledge, Appropriate Pace, and Provide Feedback. There seems to be a discrepancy between the overall summative rating that teachers are receiving, and the specific, individual rating received per indicator. When determining an overall summative rating of effective, all indicators that fall under each performance standard

must be carefully analyzed and rated individually to be able to effectively determine an accurate rating for the teacher.

To be able to effectively provide an accurate rating for a teacher, we recommend that both administrators and teachers receive training on the framework of effective instruction indicators in order to provide a uniform standard of expectation on how to effectively conduct observations and how to effectively deliver instruction using the framework for effective instruction indicators. Additionally, we recommend that administrators provide teachers with on-going timely and effective feedback focusing on the framework for effective instruction indicators.

Continued Research into Frameworks of Effective Instruction

Policymakers must invest in further research on the frameworks of effective instruction as their investment trickles down to the district levels which facilitates research and implementation of effective evaluation programs such as IPEGS. The implication of accountability creates a need for continued research in future educational trends that will impact instructional delivery, student engagement and teacher evaluation. Future research is essential as effective teaching is critical to the continued development and improvement of schools at large (Hattie, 2009; Stronge, 2018). Ongoing professional development is needed to educate teachers on the latest research-based frameworks of effective instruction. A lesson study can be conducted in schools where teachers work together to research frameworks of effective instruction. Through collaboration, teachers can enhance their understanding of effective instruction ultimately improving the delivery of their instruction.

Teacher Questioning and Providing Feedback

Teacher questioning is an integral indicator within the instructional delivery IPEGS performance standard. In-depth inquiry and metacognition are necessary strategies to promote student engagement (Finn & Zimmer, 2012). Questioning is an essential strategy that leads to student engagement (Harbour et al., 2015). The most frequently utilized instructional strategy during the observations was teacher questioning. However, questions alone do not determine their effectiveness in achieving student engagement. The levels of questions provide a more profound sense of understanding for the student, which promotes their increased engagement and achievement.

As a result of this strong correlation between Levels of Questioning and Providing Feedback it is recommended that there be a focus on professional development pertaining to levels of questions precisely so that teachers can recognize that the levels of the questions they are posing in the classroom are at levels which promote deeper thinking on the part of students to increase their engagement. Since these variables have been highlighted as essential and influential practices in the classroom (Stronge, 2018). Further, questioning encourages students to think critically, become active participants in the learning process and provides educators with an insight into the instructional adjustments needed. Additionally, research has described feedback as one of the most dominant influences in student achievement (Hattie, 2009). Preplanning is an effective means for teachers to strengthen their questioning techniques. It is important that teachers develop questions during the planning phase to ensure that high order thinking questions are asked during instruction. During planning, teachers should be focused on how the lesson will be delivered. The planning should take place with the end in mind. Teachers

should ask questions of themselves during planning that focus on: “What do I want the student to know?”; “What are the types of questions that will get them to think critically and come up with answers on their own?”; and “How can I guide them and scaffold them to this level?” When teachers ask those questions of themselves then they will know what questions to develop to help student answer the essential questions pertaining to the lesson or text. Collaborative planning utilizing standards that students are expected to know will better prepare teachers to develop questions at all levels of complexity in order to challenge students and guide their thinking to a higher level. It is also recommended that providing feedback must be meaningful and impact learning. Therefore, teachers should infuse the use of rubrics to provide specific feedback on what students are doing correct or incorrect and how to fix it.

Use of Technology in the Classroom

Engaging students in the learning process is difficult, and educators and administrators have been attempting to tackle this issue for decades (Fullan & Quinn 2016). Student engagement promotes achievement within the learning framework in which they are engaged in (Duckworth 2016; Hattie & Donoghue 2016; Kuh, 2009). One tool to consider for promoting student engagement is quality use of instructional technology in classrooms. The technology available to teachers in the classroom, if properly utilized, can promote deep student engagement and learning connections (Fullan & Quinn, 2016; Stronge, 2018).

Observations revealed that the frequency of technology utilized in the classroom was only 2.1%, during the observed segments. When technology was utilized, it was done at a rudimentary level despite the district’s efforts and monetary investments in

increasing the use of technology in the classrooms. Therefore, the district's investment to create a systemic shift towards a blended learning approach is at the enhancement step between the Substitution and Augmentation phase of the Substitution, Augmentation, Modification and Redefinition (SAMR) Model rather than at the transformation step, of the Modification and Redefinition phase, which fosters collaboration, communication, creativity, critical thinking, and problem-solving using technology. This is why Fullan and Quinn (2016) recommend focusing on "good pedagogy" (p. 6) rather than only focusing on technology. Building teachers' capacity is essential to accelerate learning and deepen instruction through the use of technology (Fullan & Quinn, 2016). Furthermore, as previously mentioned, Explicit Instruction shared a moderate relationship with the Use of Technology. The study demonstrated an increase in student engagement when Explicit Instruction was paired with integration of technology. Accordingly, we recommend that teachers increase their use of meaningful technology activities in the classroom, which can be fostered by additional professional development focused on familiarizing teachers with instructional technology tools and becoming comfortable in using these tools in the classroom setting. Teachers who are properly trained in the integration of meaningful technology activities will be in a much better position to take advantage of the features and resources that technology offers to teach content and enhance student learning and engagement. Implementing an effective blended environment may serve as a building block for personalized learning, but it also provides students with skills that are indispensable for their future academic and professional lives.

Pacing Guides

Research ranks this teaching practice as highly effective with low performing students with effect sizes ranging from .50 to .99 (Hattie, 2009). Explicit instruction can produce high levels of engagement for all students regardless of their academic abilities. Districts should adopt the elements of explicit/direct instruction in their instructional pacing guides. It is imperative that the pacing of the lessons is appropriate, concepts are presented in small steps, guided practice is provided, checks are made for student understanding and learners are engaged. Furthermore, it is recommended that instructional pacing guides infuse literacy strategies, technology, inquiry-based learning, and problem solving in order to strengthen the effectiveness of instructional delivery.

Research on Additional Classroom Observational Tools

Observational instruments that measure and compare the varied forms of student engagement are difficult to find because each form of engagement arises from a different form of disciplinary perspectives and theoretical framework. Therefore, one implication from this study is that in determining levels of engagement, the levels need to be more specific to determine active engagement, especially as engagement relates to yielding deeper student understanding. Throughout the research, it was discovered that student engagement falls under four distinct elements: behavioral, emotional, cognitive, and academic. Identifying and classifying the different types of engagement beforehand would have allowed for a better understanding in determining the types of engagement that would have had the most substantial effect of academic success rather than a high, medium, and low engagement rating. Subsequently, research on additional observational

tools is recommended to define clearly and include the various types of engagement to determine which type yields the highest levels of student engagement.

Student engagement looks different in each classroom. Specific markers or identifiers are beneficial in identifying if whether a classroom is conducive to student engagement. The instruments used in this research were narrow in nature; IPEGS had three indicators to measure Student Engagement. A need to increase the number of indicators that are aligned to the four elements of student engagement (behavioral, emotional, cognitive, and academic) would provide the observer with a clearer picture of which instructional strategy yielded a student engagement behavior. Additional instruments may include student self-reports and teachers' reports along with observations. It is crucial to consider the multiple measures an instrument produces and the ability to compare data from students, teachers, and observational methods better to understand the level of student engagement in a classroom.

Recommendations for Future Research

Additional research in the following areas will enhance the results from this study.

Teacher Questioning

Teacher questioning is the most utilized instructional strategy in the classroom, and as such, it merits specific focus to assess its utilization in an instructional setting. A quantitative study focused on the examination of the levels of questioning posed by teachers could reveal whether the time spent on questioning during instruction and the levels of the questions, is yielding the appropriate level of engagement and achievement from the student.

Another opportunity to investigate further is the relationship that exists between teacher-generated questioning versus student-generated questions. Student-generated questions actively engage the learner in the multiple ways and increases achievement. Student-generated questions also offer students the opportunity to practice, connect and make meaning of the instructional content.

Instructional Technology Use

Technology is not being used to its full potential in the classroom. Mainly because the majority of teachers are not proficient or comfortable in effectively integrating technology during teaching and learning. Accordingly, a quantitative study focusing on the different methods of technology implementation in the classroom, and the level of student engagement they yield can provide valuable data that will assist teachers in recognizing the value of the technological tools at their disposal. Therefore, the main question for future studies is, "Are we transforming the traditional learning environment through technology integration or are teachers just digitizing conventional teaching and learning methods?"

Feedback/Reflective Practices

School improvement initiatives continue to drive the research on student engagement and achievement. Student learning is influenced by the strategies and methods that teachers use to engage students. Accordingly, Schlechty (2011) related that the teacher plays the most significant role in assessing student engagement. Understanding the role teachers' play in student engagement, research indicates that students may feel extremely engaged in one class but bored in another (Jefferson-Williams, 2014; Kuh, 2009). A recommendation for future research follows the direction

of Schlechty (2011) in applying reflective practices among a community of teachers in order to share best practices that they find yields high engagement among their students. Since feedback is a high-yield strategy that has proven to bring about change, this process can be taken a step further with having students provide teachers with feedback on the strategies they found most engaging.

Emotional Engagement

Another recommendation for potential research would be to conduct a study where the different types of engagement are identified and documented while looking at the instructional strategies that are yielding the different types of engagement. It would also be valuable to further research an operational definition of engagement and how that determines and plays a role in the different types of engagement. This would further validate or invalidate previous research findings indicating that behavioral engagement is most strongly linked to academic achievement (Lei et al., 2018). It is important to recognize the role that emotional engagement plays in a classroom setting. Emotional engagement is the connection students have with the teacher, peers, and school. Therefore, research exploring this form of engagement may yield further insight and understanding on the role emotional engagement plays in the classroom. Furthermore, also involving the voices of students in discussions involving creating engaging and meaningful environments for learning to take place is critical to this continued research.

Summary

The teachers who participated in this study demonstrated effective levels of competence related to the qualities of effective teachers identified by Stronge et al. (2007). The 16 teachers shared several similarities in their teaching practices.

Observations provided clear correlations between Higher-Order learning tasks and Authentic Learning as well as Explicit Instruction with Connecting to Prior Knowledge and Providing Feedback.

Additionally, there was a significant relationship between Providing Feedback and Levels of Questioning. Within the 96 observational periods, Levels of Questioning demonstrated the strongest association with the use of Literacy Strategies, Appropriate Instructional Pacing, and Providing Feedback. Appropriate pacing during instructional delivery revealed a strong correlation with the instructor's knowledge of content. The teachers used a variety of instructional strategies. There was a preponderance of evidence indicating that most of the lessons observed were conducted through explicit instruction. The teachers directed most learning activities.

The findings of this study confirm that the teacher continues to be the primary director of learning. More specifically, this study reveals a low to moderate correlation between the instructional delivery indicators and student engagement. Furthermore, it also demonstrates that there was no significant relationship between student engagement indicators and the levels of student engagement. Based on the current findings, additional research is needed to identify which instructional strategies may predict higher levels of student engagement in the classroom. The study also reveals the importance of professional development in the areas of Explicit Instruction, Use of Questioning, Providing Feedback, and Use of Technology. In an effort to continue building teacher capacity, Miami-Dade County Public Schools should contemplate providing professional development in these areas.

CHAPTER 6

PROFESSIONAL REFLECTIONS

This dissertation was the result of a joint effort. Chapter 6 offers a reflection of each member's individual account of leadership transformation and how teamwork contributed to our professional growth. Our thoughts regarding participating in the dissertation process and our individual professional growth are presented in alphabetical order by the last name of each of the dissertation team members.

Yesenia M. Aponte

Leadership transformation. The College of William and Mary's Executive Doctorate of Education program has provided me with a new and expanded frame encompassing Habits of Minds in my current and, hopefully, future administrative roles with the Miami-Dade County Public Schools. This doctoral program has strengthened my ability and skills through real-life situations by responding thoughtfully and intentionally to reach a positive outcome. Throughout my journey in the program, I have refined and developed multiple skills such as listening with understanding and empathy, thinking flexibly, striving for accuracy, thinking and communicating with clarity and precision, gathering data through all senses, thinking interdependently, remaining open to continuous learning, and creating, imagining, and innovating (Costa & Kallick, 2009).

The program has exposed me to research and readings highly aligned with Habits of Mind and afforded me the opportunity to enhance my professional skills through this journey. *Leadership and the New Science* was a reading that caused an impactful change in my leadership style. Wheatley (2006) emphasized the significance of human relationships and that behaviors in work influence relationships. I learned to appreciate the importance of creating relationships with the staff and sharing valuable information. Further, Wheatley (2006) highlighted the importance of changing beliefs and behaviors about information, relationships, control, and chaos. I believe I developed the ability to work better with others, welcomed their input and opinions, and learned from others.

Wheatley (2006) mentioned that to create change in an organization, we need abundant access to information as it is the driving force behind change. As the book highlights, information informs us and forms us. I understand the importance of gathering data from all available sources to make data-driven decisions. I learned to take the time to analyze data and consider its implications. Moreover, Wheatley (2006) confirmed the need to think differently about how to use, evaluate, and structure teachers to improve their abilities and make a difference in the school. I have acquired an open mind-set and understanding of the necessity to build relationships and capacity within an organization. The integration of these attributes in my leadership style has assisted me in establishing relationships, strengthening my school's vision, and accomplishing a great success.

The importance of establishing relationships has resounded through this doctoral program. It has been a characteristic that I put in practice and will continue to cultivate in my role as an instructional leader in MDCPS. Peters and Waterman (2004) identified the two qualities of successful companies: Close to the Customer and Productivity through

People. These qualities are aligned to Wheatley's (2006) concepts that relationships are the very fabric of the team. Wheatley (2006) stated the importance of establishing different relationships to energize a team. Behaviors in the workplace influence relationships; thus, it is essential to listen to the customers and understand their needs and expectations. Additionally, actions must speak for themselves. The value of promoting and empowering my staff and treating them as partners has been instilled in me as a fundamental element of my leadership style.

This doctoral program exposed me to Fullan and Quinn's (2016) Coherence Framework. Fullan and Quinn (2016) identified the following as areas that promote collaborative cultures: the culture of growth, learning leadership, capacity building, and collaborative work. These four areas are highly associated with the theme of building relationships. Learning leadership is one of the areas I can describe as being more successful and evident in my role as a school principal. I have learned the importance of being instructionally focused. I have established weekly leadership team meetings centered on student learning, and I have ensured that my leadership meetings are productive. We have meaningful conversations, we make decisions together, and we establish a plan for our vision.

A school's culture is significant in the success of the leader. Building a school culture entails establishing relationships with all stakeholders, parents, teachers, support staff, and community members. As a leader, I have instilled the importance of building relationships with all my stakeholders. My genuine interest in building the capacity of my teachers is demonstrated through my daily interactions with them and the students. I have

embraced the importance and value of trust and collaborating with all stakeholders to achieve success.

Additional research sources that resonated with me throughout this journey are the work of Darling-Hammond (2010) and Skrla, McKenzie, and Scheurich (2009). I gathered insight on the importance of examining educational policies, practices, and programs necessary to eliminate barriers to learning and achievement in order to close the achievement gap.

The doctoral program has raised my awareness of the role race/ethnicity, national origin, disability, socioeconomic status, language, faith, and sexual orientation plays in overcoming challenges of student learning and achievement. As a school leader, I have developed a more in-depth understanding of the importance of my response to issues related to diversity and equity. Skrla et al. (2009) explained that systemic equity is what is required to eliminate the achievement gap that currently exists across the country. They define system equity as "the transformed ways in which systems and individuals habitually operate to ensure that every learner…has the greatest opportunity to learn" by providing them with what they need (Skrla et al., 2009, p. 14). Equity promotes fairness by addressing the individualized needs of students and giving unequal amounts of support to ensure success. As a school leader, I am aware that not all students are the same; thus, we must give them what they need to be successful.

Throughout this journey, I have learned the importance of how others perceive you as a leader and your leadership style. "Leadership will continue to have a different meaning for different people" (Northouse, 2016, p. 5). Leadership is a complicated concept that is prompted by factors such as global influences and generational differences

(Northouse, 2016). Nonetheless, this program has enhanced my awareness of my integrated styles of leadership: transformational, servant, and transparent. My story as an educational leader centers around relationships, vision, service, transparency, and self-reflection. Relationships will continue to be an integral part of my story as a leader. I firmly believe great leaders establish honest relationships with their followers. Being honest builds the trust and confidence of my colleagues. I believe you make strong relationships when you lead by example. Followers depend on what they witness their leaders do. Followers yearn to have these relationships with their leaders. As a result, they more readily display loyalty and allegiance to their leaders. As a school administrator, it is essential to establish these positive relationships since, according to Wilson (2002), we appear not to see ourselves as others see us. Therefore, these relationships with my colleagues must be based on honesty, confidence, and trust to ensure that they help me understand their perceptions of my leadership style.

Effective leaders have a vision for their organization. I have a sincere desire to make things happen and act as a positive change agent. I like to paint a vision of the future for my peers. I envision and communicate my vision and goals with others. I strive to make my vision and plan as detailed, precise, and clear as possible. Followers must be aware of the idea and the strategy to reach the vision, providing followers with a purpose that builds their capacity to ensure sustainability in my absence.

Wilson (2002) highlighted how goal setting is one of the essential features of our consciousness. At times our "adaptive unconscious can choose a different goal from the one we would if we thought it through consciously" (Wilson, 2002, p. 34). This journey has equipped me with the tools necessary to overcome the obstacles that interfere with

accomplishing my vision. Nonetheless, my desire to make things happen and be a change agent may also be attributed to one of the three desires for affliction, power, or achievement that are part of a person's nonconscious personality (Wilson, 2002).

Notable leaders are competent and flexible and engage in self-reflection. Self-reflection has become an integral part of my story as part of this program. Being reflective is a process in which I consciously participate after completing a task, project, or action plan on a personal and school-site level. Being self-reflective will enable me to adapt my leadership style according to the circumstances, situations, and needs of my school. Self-reflection allows me to reflect on my strengths and weaknesses and the impact on my school. Wilson (2002) stressed that we cannot access our nonconscious minds, but being involved in backward planning, examining our behaviors, and developing a notion even though it may not be accurate is useful in shedding insight on our unconscious behaviors and adjusting our future action plans.

Establishing relationships, instilling a vision, and being reflective are three active elements of my story as an educational leader. My journey has been one of constant growth. I genuinely enjoy working with others, developing leaders, helping my colleagues, and mentoring. Nevertheless, I must remember the importance of pausing, reflecting, and looking outside of myself. I must see myself through the eyes of my peers to learn further and grow more as an instructional leader. I must be mindful of the impact my unconscious mind has over my behavior and personality. I must be thoughtful of how it may influence my interaction with others. My story is one that is still in the making. I will continue to pause, search outside of myself, understand my colleagues' perceptions, and be sensitive to the role that my daily decision-making plays.

Collaborative scholarship. Our research team engaged in a conversation on the unified approaches and layers of support M-DPCS provides to its schools, yet discrepancies within student proficiencies and learning gains throughout the school district still exist. This discrepancy is very evident among our four schools. As a principal with experience working in low-performing schools with multiple layers of support and in high-performing schools with minimal layers of support, I wondered how we could strengthen the existing practices and policies to increase student achievement. We know the teacher is the most influential factor in student learning. Therefore, we approached the problem with a focus on teachers and the instructional practices implemented during instructional delivery that would generate higher levels of student engagement. We were intrigued if teachers were infusing instructional strategies that engage students throughout the lesson.

We were fortunate to have been assigned to Drs. Stronge and Ward as our co-chairs. Together, with their guidance and suggestions, we decided on a cross-case analysis since we were comparing each other's teachers. Together, we researched a tool suggested by Dr. Stronge that encompassed elements on which we wanted to gain insight during our study. We decided on fourth- and fifth-grade teachers since we have substantial data on the students for these teachers, and all of us were eager to increase student achievement in our schools. The success of our group is greatly attributed to the shared vision and clear focus on improving student performance.

An initial challenge we encountered was my reassignment from a small, low-performing school to a large, high-performing school. Nonetheless, my currently assigned school's data still generated the same concerns—a discrepancy in student

performance. During our study, we encountered minimal challenges. As a team, we would address these obstacles and continue with our plan of action. I would attribute this success in overcoming our obstacles to the relationship we had developed while in the program. Each of us grew closer as the program developed. We generally would gravitate towards each other when working on assignments. We were fortunate to be assigned to many projects together. This truly made a difference in our work as a research team.

Further, the structure of the program was pivotal to the successful transition from an individual member of a cohort to a research team. The College of William and Mary Executive Educational Doctoral program infused an array of instructional practices that encouraged individuals to be problem solvers, collaborators, and reflective practitioners. It instills the importance of group accountability and building relationships with each other. Through research and meaningful discussions, we developed an understanding of each other's perspectives. These attributes set a strong foundation for our work as a research team. Through the past months, our research team has grown strongly from colleagues to genuine friends. We developed a personal bond that was beyond the collegial relationship that existed. This personal bond was the glue that made this research team a success.

Our success as a research team was also the ability to overcome some challenges. We struggled with schedules, school responsibilities, personal life commitments, and time management. We always set a day and time to meet, either in late evenings or Saturdays. We would regularly meet on Saturdays at our favorite coffee shop and spend our day. Our meetings were focused on following our timeline. Each meeting ended with a timetable for the next week. Throughout the week, we would engage in multiple texts

through our “Dissertation BFF” group chat. We set deadlines to help manage our time more efficiently. We struggled to schedule our observations since all four of us had to conduct them simultaneously, and our schedules at times conflicted due to school-related commitments. Nonetheless, we always engaged in meaningful and thought-provoking conversations during our calibration stage, data collection stage, and the data analysis stage. It was evident during these conversations the passion each of us had for student learning.

Lessons learned from this journey were the importance of professional growth, self-reflection, and building on the strengths of our team members to collaborate successfully. Each member brought a characteristic to the team that made it exceptional. We had the member that was the technology expert, the motivator, the timekeeper, the scheduler, the planner, and one that would start discussions zealously. Another impactful part of this journey was the hours spent engaged in conversations on instructional practices, student engagement, and student achievement. These conversations refueled us for the next week. They would confirm our passion for student learning and school leadership. We would find ourselves lost in time, discussing the research, the data, and the findings.

Nevertheless, our work as a team would not be as impactful without the guidance and support of our Chair, Dr. Stronge, and Co-Chair, Dr. Ward. Their guidance, questions, and comments clarified many misunderstandings. Their assistance in navigating through the research, our collected data, and findings furthered our understanding of our study. It has been an honor and privilege to have been selected by MDCPS to join this prestigious doctoral program with the College of William and Mary.

This program has enhanced my professional growth in the areas of leadership, research, data, relationship building, policy and practices, culture, and self-reflection. The program has fostered a passion for continuous learning and building capacity. I am grateful for the opportunity to engage in this collaborative work with a fantastic group of professionals. These collaborative efforts made it possible for me to reach a lifetime dream of earning a doctoral degree.

Yanelys Canales

Leadership transformation. The College of William and Mary's Executive EdD program in Educational Policy, Planning, and Leadership has provided me with an expanded frame of reference as a school site administrator in Miami-Dade County Public Schools. Having the opportunity to participate in the doctoral process exposed me to new ideas, policies, philosophies, and relevant research that will be of great significance in my current and future roles with MDCPS.

Wheatley (2006) introduced concepts such as "relationship building" that focus on networking. These ideas presented by Wheatley have added to my continued interest in altering my current mind-set of leadership. A leader needs to be able to connect with diverse individuals who, despite differences, will be able to trust you in order to accomplish shared goals. Wheatley (2006) further explained that relationships are the very fabric of the team. Diversity brings new ways of looking at life in organizations and can reveal things that can give you a greater sense of potency and make you more able to do things well. Relationships are what matters in any organization. According to DiPaola and Wagner (2018), effective principals recognize that their sphere of influence and the way of genuinely affecting student achievement is via the teacher. The interaction that

principals have with teachers in the instructional program has the potential to increase student achievement. Entering my third year as the principal of my current school, I have been able to apply the concepts of relationship building in my daily practice in order to bring about change at my school.

Fullan and Quinn (2016) identified areas that promote collaborative cultures: the culture of growth, learning leadership, capacity building, and collaborative work. These four areas are correlated to the relationship-building philosophy and my current approach to leadership at my school. I firmly believe that there should be a culture of growth because the mindset does matter. Instructional leaders should support learning, innovation, and action building. I have been able to focus more on seeing talent and cultivating those who have potential by empowering them and creating opportunities where they can showcase their talent and often step out of their comfort zone.

The concept of chaos was an "aha" moment for me. Traditionally, chaos is something of which, as an instructional leader, I have always wanted to steer very clear. I can attest to leading with the mind-set that as the principal, I must be in full control. However, with experience comes my alignment with Wheatley's concepts as they relate to full control and destruction. As the instructional leader of my school, I have been able to embrace the idea that empowering those around you to lead and be creative and treating the organization as a living system, as presented by Wheatley (2006), is very valuable in the success of an organization. This concept has allowed me to have greater flexibility, resiliency, and the ability to adapt, change, and grow. The idea of chaos is something that I can and will embrace as I continue to build relationships and capacity among educators whom I lead. Challenging myself and my teachers to embrace rather

than shy away from new information or ideas because they confuse or overwhelm us will become a standard of practice when dealing with different situations. My role has shifted to creating opportunities and looking at the information with different lenses in order to generate the answers needed to bring about the desired change

Moving forward, I plan on continuing to build a culture of lifelong learning and reflective growth using feedback. Leading by example and providing feedback and soliciting feedback from my teachers will send a clear message that administrators, too, are excited to use feedback to learn and improve. According to Hattie (2009), feedback has an effect size of .73, making it a highly valuable teaching strategy. This "culture of feedback" demonstrates to teachers and students alike that their opinions matter and that trial and error and taking advice are all part of a healthy improvement process for everyone. Wiggins (2012) defined feedback as information not based on opinions of how one is doing in order to reach a goal. Providing timely and factual feedback to my stakeholders has become an essential part of my role as principal in assisting teachers in improving their practice, and this feedback should lead the teacher to be able to affect student growth and improvement. Continuing to utilize the Framework for Effective Instruction will assist me in building teacher capacity in my school. It is essential for our district to continue to develop administrators' ability to provide feedback to teachers in order to bring about change and growth.

As Wilson (2002) described, examining one's own mind as "introspection," encouraged me to conduct a self-analysis at the beginning of the doctoral program. Originally, I viewed myself as a very fair person and my decisions were made for the best interest of the students and the school. As a result of reading and researching varied

philosophies and topics, I strongly believe that it is compelling and necessary to be aware of how one is viewed as a leader. It is vital to reflect daily on decisions and choices made and the impact that those decisions have on the school and community. In fact, I also think that one of my greatest strengths is to solicit the feedback of the staff and involve them in making decisions for the school. This practice has allowed me to have buy-in from the staff to introduce new initiatives that impact student learning. Sashkin and Rosenback (1993) described this type of leadership as transformational. My goal as a school leader is to continue to exercise the characteristics and attributes of a transformational leader, according to Northouse (2016), where others will adopt an attitude and vision of continuous improvement in a positive school culture where staff holds high expectations for themselves and the students.

Although I consider myself a transformational leader, I can also relate to the model of authentic leadership as I value strong relationships with people in order to build connections and develop a sense of trust through interpersonal interactions (Northouse, 2016). I strongly believe in having a clear purpose as a critical element to leading. According to Northouse (2016), authentic leaders know their purpose and are inspired and intrinsically motivated by this purpose to achieve their goals. Ultimately, the situational leadership model developed by Hersey and Blanchard (1969) relates to my personal definition of leadership based on the importance of the relationship that must exist between leaders and followers in addition to the ability to adapt and be flexible, depending on the situation. As the instructional leader of my school, I have been able to relate to this leadership model, and I find that there is no one style of leadership that is appropriate for every situation. Therefore, the most effective form depends upon the

situation at hand. Research by Walter, Caldwell, and Marshall (1980) states that leaders who attend to both task and personal needs are the most effective; indeed, most of the evidence indicates that no one style of leadership is consistently more effective than another. Leithwood, Jantzi, and Steinbach (1999) stated that most successful leaders are likely to embody most or all different leadership theory approaches in their work.

In spite of the fact that my job involves constant problem solving and responding to critical situations requiring immediate solutions to address the problems that arise to ensure the safety of students and staff, this type of thinking, according to Senge (2000) may make matters worse over time. Doubtless, certain situations require immediate decisions; however, the underlying problem needs to be addressed, utilizing a system thinking approach rather than applying symptomatic solutions that eventually feed the issues and cause people to fail (Senge, 2000). This approach is another takeaway that I will practice in approaching problems using a systems design method where I will be able to understand the patterns that shape behavior. This approach requires a different mind-set in order to look at the root of the problem as a system. The process requires deep and reflective thinking to occur in order to come up with reasonable solutions. I find that many of these concepts are interrelated and help guide effective leadership. Incorporating Senge's viewpoints on systems thinking along with Fullan and Quinn's focus on coherence has allowed me to see things differently, and I have started to focus more on the collective ability to build shared meaning, have consistency of purpose, work on building capacity, and not only "walk the talk" but also a "talk the walk" where people can explain themselves specifically and clearly. Creating a sticking-together mind-set in

any organization allows for the growth of coherence, which creates purposeful action and interaction.

Engaging in this doctoral program and dissertation process has provided me with a new perspective on leadership and my role as an instructional leader in dealing with the challenges with which I am presented daily. Having the opportunity to investigate problems by reviewing research, conducting studies, and analyzing data have better prepared me to lead, utilizing high-yield strategies to bring about change. I find that I am better equipped to be able to analyze and interpret information. Using data and research to enhance education and student achievement should be a standard of practice across all schools and districts. It is my belief that a true leader should adapt to changing situations and have high expectations not only for their staff but especially for themselves.

Collaborative scholarship. Identifying a problem of practice came about through numerous conversations and discussions based on what interested each of us as instructional leaders that could directly tie into the district's vision of building leader and teacher capacity. We focused on a problem that directly impacted our daily practice as principals in our schools and across the district. We believed it was critical to, therefore, select a topic which we were passionate and would keep us motivated. Many elements of the teaching process have been linked to effectiveness in teaching, including the strategies teachers use, the clarity of their explanation of instructional content, and the types of questions they ask. We decided to focus on how instructional strategies relate to and affect student engagement across four different schools. Focusing on this problem of practice was something that I was very interested in researching especially since I was recently placed at a traditionally high-performing school that had been struggling for

several years after changes in demographics and transition to the Florida State Assessment. I knew that change was needed, especially when comparing my school to other schools that were traditionally viewed as lower performing and were trending better academically. Taking a more in-depth look at how instructional strategies could potentially affect student engagement intrigued us all as we are always looking at ways to increase student achievement.

The structure of the doctoral program at the College of William and Mary helped prepare me for group work from the onset. The way that the courses were set up encouraged participation and discussion and facilitated the collaboration among the cohort group members. This structure allowed the cohort to build strong relationships and see things through different lenses and perspectives. Group accountability ensured that all members stayed current and up to date as we each relied upon each other for feedback and discussions. This process greatly assisted in setting the tone for the group dissertation process. The group dissertation did pose some challenges; however, the rewards allowed for tremendous professional and personal growth. At the beginning of the dissertation process, we all knew each other collegially but nowhere to the extent of the relationships that were built through this experience. I was able to get to know my dissertation group professionally and on a personal level. The amount of quality time shared added immensely to me as a professional. We were able to challenge each other's thinking and viewpoints, ensuring that we were looking at the process and data carefully and not jeopardize the validity and reliability of the research study. Although we did experience some challenges in trying to schedule our meetings around our late-night work responsibilities and personal family commitments, we managed to meet regularly using

different mediums such as zoom sessions enhancing our collaboration. We set weekly and monthly timelines to keep us all focused, and we collaborated and worked hard to make sure that our self-imposed deadlines were met. We also experienced challenges scheduling the observations, as they required all of us to take time off from work in order to accomplish them. The collection of data was another area of challenge to the completion of our research because of the time involved and the constraints. Nevertheless, the discussions that were had throughout this entire process, especially during the calibration phase as we were trying to figure things out, were compelling and thought-provoking, providing us with the right tools for data collection not to jeopardize the validity and reliability of the study.

This experience is one I will cherish for the tremendous self-growth that it offered. Without a doubt, it challenged me to do better and not let my group down. As members of a research study team, we were able to identify and build on each other's strengths through collaboration and critical discussions. There is so much to say about the immense benefits and power of learning from each other and being open to seeing things through different lenses and perspectives. In the end, it only makes us stronger in every way. This same collaboration and guidance were evident by our dissertation chairs, Dr. Stronge and Dr. Ward, and Committee Member Dr. Constantino, who supported us and greatly assisted in guiding our research and progress along the way. They directed us to the right places and appropriate resources. They helped make sense of our data and the entire research process with their own unique knowledge and expertise.

It has been a privilege to have been selected by MDCPS to participate in such a prestigious program as this doctoral program at the College of William and Mary. It was

a transformative process for me, a self-discovery experience of how much I could persevere to accomplish something I consider worthwhile. I firmly believe that collaboration and discussion help bring about change through varied systematic processes. Building on established research and utilizing it to guide one's practice has great strength. The extent of the collaboration and magnitude of professional growth offered via this program will very likely lead the way as a model for doctoral programs across the country as it relates to real-life work environments.

Mayte Dovale

Leadership transformation. Pursuing a doctoral degree afforded to me by the College of William and Mary has provided me with a new and expanded frame of reference. As an educational leader, the experience has enriched my educational foundations. The exposure of new ideas and relevant research in the areas of educational policy, planning, and leadership, as well as collaborative scholarship, has given me indispensable knowledge for my current role as a principal and for future positions with MDCPS.

Leadership is a common and straightforward word yet challenging to define because of its complexity and multifaceted composition (Northouse, 2016). Consequently, the concept has multiple dimensions, and scholars have been searching for a standard definition for decades to no avail (Northouse, 2016). Even though a standard definition does not exist, there are several components that have been identified as essential to the complex process of leadership. Northouse (2015) described these components as follows: "Leadership is a process, leadership involves influence, leadership occurs in groups, and leadership involves common goals" (p. 6). Using the

components, Northouse (2015) goes further to create a definition of leadership: "Leadership is a process whereby an individual influences a group of individuals to achieve a common goal" (p. 6). The definition shared by Northouse (2015) resonates with me. Therefore, with this definition as my guide, I have been able to work alongside my team of teachers, parents, students, and staff to influence change, embrace new concepts and ideas that benefit the overall learning environment at my school. In my view, as a school site principal, I must build the capacity of a community of individuals that will help transform the learning environment based on sound educational practices to work toward a common goal that impacts students and their academic achievements. Thus, it is my responsibility to serve the community of learners entrusted to me with a safe learning environment, providing them with the best education possible. Juana Bordas (2012), author of *Salsa, Soul, and Spirit: Leadership for a Multicultural Age*, taps into leaders as community stewards. Bordas (2012) references Robert Greenleaf's concept of leadership in which he emphasizes leadership as a collaborative and participatory process and rejects the notion that leadership is a tiered domain for the privileged few. Like Northouse (2016), Greenleaf believes that leadership entails delegating, organizing, accountability, sharing benefits, and developing others. This definition of leadership coincides with my leadership style. This educational experience has helped me better define my leadership style. Initially, in the process, I described myself as a Servant and Adaptive Leader (Northouse, 2016). However, the program has helped me realize that although I still lead with my heart, I have learned to incorporate the lessons learned to navigate consciously through the various leadership styles based on the situation at hand.

Leaders are also considered agents of change (Wheatley, 2006). As effective leaders, we must anticipate change, big or small, and respond by educating ourselves with all facets of the situation and adapting to allow growth to take place. Change is an inevitable process of life. It affects all aspects of our life but remains strongly resisted. Wheatley (2006) described a world that is in constant unrest and built upon interrelated relationships that contribute to the whole. She explained that as a system changes, chaos ensues, resulting in the renewal of the system. She described the renewal process as a cycle of change, creating endless connections in nature and ultimately developing into relationships that evolve. Education resembles a similar process since schools are a microcosm of our environment and the community in which we live. Ultimately, relationships between students, staff, the community, and the district need to be coordinated to continuously evolve. However, the reality can be very different. Unfortunately, the messages or intentions get lost in policy or planning or are simply challenged by the stakeholders. Although Wheatley (2006) presented some convincing arguments for how leaders and organizations can function more effectively through the use of the quantum physics theory, claiming that "chaos is a necessary process for the creation of new order" (pg. xiii) as a school site leader it feels awkward to accept that a chaotic, disorderly environment is necessary to effect change. Thus, acknowledging that change can be messy or chaotic in leadership.

To face the chaos, leaders must find the "glue that will increase the coherence of district and school efforts at every level" (Fullan & Quinn, 2016, p. 17) and take massive action to improve learning. Fullan and Quinn (2016) suggested focusing direction as one of the components of the "glue" in their Coherence Framework that has the ability to

sustain the demands of internal and external forces within education. Coherence, according to Fullan and Quinn (2016), consists of a shared depth of understanding concerning the purpose and nature of the work required. Leaders must merge purposeful action and interaction to achieve coherence. They must provide transparency, monitor practice, share clarity of ideas, and continue making adjustments to meet the ever-changing educational landscape, again emphasizing that all stakeholders play a significant role in finding solutions to complex educational concerns (Northouse, 2016).

The lessons learned during this doctoral program have equipped me with the tools necessary to identify my role as a leader within each situation. Wheatley's (2006) ideas of leadership and how organizations work have compelled me to explore the strengths, weaknesses, and input of stakeholders, to understand their perceptions and capabilities better. She suggests imparting a sense of responsibility to be fully informed with policy, initiatives, and educational trends as a means of educating stakeholders. Relationships among stakeholders have also been a common theme throughout the coursework. It has solidified the importance of dedicating time to students, staff, and parents. In a day and age where time is a commodity, I find it necessary to respect others by taking the time to listen deeply, engage in meaningful conversations, and actively engage as an agent of change on behalf of students. If I am going to use Northouse's (2016) definition as my guide, then my role as a school site leader is to unite stakeholders by influencing them through education, working alongside them throughout the process of change, and facilitating the chaos to reach common goals related to teaching and learning. It is my intent to take on the challenge asked by Fullan and Quinn (2016) and make a difference by being a "coherence maker in chaotic times" (p. 137).

Collaborative scholarship. Working as a group was a gratifying experience. Miami-Dade County Public Schools' educational blueprint focuses on a singular goal: student achievement. As principals, our dissertation team decided after many professional conversations on a plethora of educational topics, individual interests, and the pillars identified in the district's educational blueprint on a few potential problems of practice. Our aim was to focus on a relevant problem of practice that would benefit teaching and learning and contributed to the current literature and research. After much deliberation among the dissertation team and guidance from Drs. Stronge and Ward, student engagement emerged as our topic. We were able to narrow our research questions with the support and guidance of both Dr. Stronge and Dr. Ward and began the task of research.

A common theme throughout the literature is the pivotal role teachers play in the learning process. Stronge's (2018) research links effective teachers directly to student achievement. Therefore, the team believed it was essential to investigate further the strategies effective teachers employ to engage students in learning. Since our focus was to determine ways student engagement was affected by instructional strategies, it was agreed that we investigate how the students at our schools faired on the topic. The notion of researching an issue that would provide insight into the academic growth of students was exciting. Ultimately, our research topic was narrowed to focus on how instructional strategies relate and affect student engagement across our four schools. As an instructional leader at a school where students perform at mid to high levels of proficiency on standardized testing yet demonstrate low levels of learning gains on the

same assessments, it was my hope to gain an in-depth understanding of students' academic performance in an effort to build the capacity of my teachers.

William and Mary's Executive EdD program offered us an alternative to the traditional delivery classroom model that I had not previously experienced. Without sacrificing quality, education courses were taught through a blended method of both online and face-to-face classes, gradually transferring to solely online. The School of Education faculty members met my needs as a full-time employed practitioner. The Educational Planning, Policy, and Leadership program laid the foundation for collaborative work from the start. Courses were designed to illicit discussions, facilitate shared visions, and develop ideas through deep collaboration and individual accountability. Consequently, the course design led to fellowship and professional relationships among the members of the cohort. The methods engaged throughout the coursework facilitated the group dissertation process and allowed us to cultivate a culture of knowledge.

Our dissertation group began as acquaintances; we knew one another from meetings and through collaboration on professional development projects and other district endeavors. Nevertheless, this experience has truly transformed our casual professional relationship into a lifelong friendship. During this past year, we have dedicated countless hours to research, writing, discussions, data collection, and meetings, resulting in deep collaboration and an abundance of knowledge.

Challenges were handled through problem-solving and compromise. The difficulties experienced related primarily to work schedules and family responsibilities. We endured some personal struggles throughout the process, but the struggles only

strengthened our bond as colleagues and as a dissertation team. Professionally, we metamorphosed as principals as we developed our keen observation skills through the calibration process. The process of calibrating classroom observations proved to be instrumental. The exercise familiarized us with the Differentiated Classroom Observation Scale and solidified the intended use of the Instructional Framework Performance Evaluation and Growth System rating scales for the purposes of our study. Our weekly meetings included an agenda, timeframe, and member responsibilities, guaranteeing accountability and safeguarding our target goals. We worked together, independently and in pairs, using Zoom, Google Docs, email, and cell phones throughout the year. I am proud of the meaningful work we accomplished and the results we generated.

The gift of education has provided me with many opportunities. I am the first person in my family to graduate from high school, let alone college and a doctoral degree. As a Cuban immigrant entering the United States of America at two years old without my parents, this opportunity and milestone represent my "American Dream." It has been a privilege to have been selected by Miami-Dade County Public Schools to pursue the pinnacle of my educational career at such a prestigious university. William and Mary's Executive EdD program has helped me transform as an instructional leader with the partnership of its faculty members, the MDCPS cohort, and my dissertation group to pursue a dissertation that resulted in an improved understanding, experience, and outcomes of teaching and learning.

My learning went beyond the classroom or, in this case, the computer, for I learned a great deal about myself throughout this process. Engaging in this doctoral program and the dissertation journey provided me with a new perspective on leadership.

The opportunity to research a problem of practice has better prepared me to use research, analyze data, and provide feedback to influence transformation in an educational setting (Wheatley, 2006). I have always valued the importance of collaboration among professionals and have participated in various district-sponsored initiatives, but nothing prepared me for the level of professional learning this program would present. I am pleased with my ability to persevere in attaining this professional milestone.

Bisleixis Tejeiro

Leadership transformation. When embarking on a higher education degree, especially a doctoral degree, one hopes to expand not only the breadth of knowledge and mastery one possesses in a concentrated field of study, but also to develop the individual professional capacity one has to execute effectively the newly acquired knowledge. My experience in the doctoral program has provided me the opportunity to achieve both confidently.

Finding innovative ways to make education meaningful for students is critical but often very difficult to achieve. Darling-Hammond (2010) scrutinizes the origin of the educational system and illustrates how the essential skills needed for the 21st-century global economy cannot be learned in traditional educational systems, which have been in place since the early 1900s. She classifies an "opportunity gap" that has advanced as new kinds of knowledge have become necessary, a gap where low-income students, black students, and English Language Learners often do not have the same opportunities as others to access highly qualified teachers, high-quality curriculum, and well-resourced classrooms.

Prior to participating in the program, my ability to analyze, interpret, and act upon data, observations, and initiatives conformed to the educational principles I had acquired during my education, work experience as an educator and administrator, and in professional development attended. In sum, it was a singularly developed skill set toward problem solving that I had fine-tuned based on my individual experiences. This program has expanded my ability to understand that my experiences and knowledge, although valuable on their own, are inadequate to continually develop me as a highly effective administrator. A system-geared, observationally evaluated assessment of methods, in conjunction with the constant critique and improvement of the adequacy of utilized developmental strategies in classrooms, is a necessary protocol to avoid the biases administrators may develop from their past success in educational settings. Observations performed by administration must focus on teacher effectiveness and teacher growth. “Supervising instruction is truly a multifaceted task that challenges even the most competent principals” (DiPaola & Wagner, 2018, p. 143). Improvement in the classroom will only be achieved through innovative problem solving and improved leadership at the school site and district level as we are charged with the professional development of teachers, which, in turn, trickles down to the classroom and student performance. This program has armed me with the vision and tools to improve my responsibilities as an administrator to observe, assess, and act upon observations and data from a whole perspective that will be invaluable to my teachers and of the most significant benefit to my students.

This program has taught me that as an administrator being dealt constant protocol and guidelines from district and state level, it is easy to fall into the trap of robotically

applying and implementing rigid mandates and, as a consequence, lose the ability to recognize that each school has their individual needs. As Margaret J. Wheatley (2006) stated in *Leadership and the New Science*, we must embrace the chaos that exists in our own school sites, among our teachers, demographics, and student body, and understand that their maximum collective potential will only be realized when administrators are receptive to the unique factors under which we operate. As a leader, I learned to accept chaos as an essential practice needed to refresh and rejuvenate my school and staff members. A work environment must be created where people feel comfortable to share ideas freely and support each other.

My experience in this program has taught me to avoid the pragmatic approach of following delegated protocols, which, although proven to achieve success, are not enough. Instead, it is essential to pause and absorb everything from the school environment to determine each aspect independently. I can utilize what could be perceived as an insignificant factor as a developable component in the chaos that exists at the school site. When an administrator is able to accept and master this ability, he or she will assist students in achieving the excellence of which they are all individually capable.

I have grown into a more competent and informed administrator because of my experience in this doctoral program. Prior to the program, my approach was consistently uniform when performing observations and trying to develop and improve my teachers' effectiveness. As I have progressed through the program, I have developed an ability to think outside the box and craft individually tailored strategies in developing and improving my teachers by gearing their developmental and training opportunities to focus on the challenges they are experiencing personally and in their individual classroom

settings. Therefore, my teachers have become more receptive to my guidance. My teachers have increased their confidence in the implementation of strategies, resulting in professional improvements. Teacher buy-in relating to the approaches and with the execution of strategy set in place has resulted in measurable success in student performance. This is evident in my school being on the cusp of achieving a B rating, as opposed to the low D rating it had when I was appointed four years ago. Personally, my confidence as an administrator has grown exponentially. This program has positively enhanced my awareness and leadership abilities in a measurable and positive manner.

Collaborative scholarship. As an administrator, one develops an individual lonesome approach to his or her career as opposed to the collegial atmosphere one enjoys as a teacher. In administration, positions are scarce, and your sources for guidance are the very people with whom you are competing when you plan to apply for job promotions. Therefore, you are left to problem solve on your own with assistance from the regional and district levels. This setting results in administrators developing a healthy take-charge attitude in problem solving and accepting their challenges along the way as they continue to grow professionally, which promotes confidence in each administrator to handle things his or her own way. It was challenging when four administrators were grouped together to collaborate in identifying issues and determining the most effective research methods and procedures on conducting research.

The program of study itself assisted a great deal in helping to overcome my individual inclination to control the process as I do every day at my school site. According to Fullan and Quinn (2016), the development of relationships among diverse elements in the organization, including those who raise objections, is essential. This

understanding of the development of relationships is directly aligned with the understanding that conflict can also be constructive. We were forced to become leaders among a group of leaders. We had to recognize our individual strengths and be receptive to the other members' strengths and defer to them for the group to be successful. Once accepted and applied at a personal level, it opened up a harmonious flow of ideas and solutions, allowing us to set out a clear road map for our research and work.

Logistics was a significant challenge we had to overcome as a group. As administrators, we are required to be at our school sites, and any absence must be approved at a regional level. Our research team had members who were principals in different regions. Our work obligations, such as meetings, training engagements, lower-level administrator coordination at our specific school sites, and educator availability for observations, were not in sync. This situation posed difficulty in scheduling observation dates and coordinating analysis of data. We were able to overcome this challenge by creating different timelines along the way that provided structure and assisted us in meeting deadlines.

I feel privileged to have been selected by MDCPS to participate in this prestigious doctoral program at the College of William and Mary. I learned how to go outside of my comfort zone and to work in a group by engaging in constant communication with other members. Accepting ideas from other group members instead of focusing on individual desires allowed me to embrace the spirit of collaboration and teamwork toward a common goal. This experience will serve me well in my current position as an administrator where these skill sets are required to be effective. The cohort experience was an unexpected component when we commenced this program and, in retrospect, has

been one of the most valuable opportunities for self-improvement. It required us to improve ourselves at an individual level and not just at an academic level. I know I will always draw on this experience throughout my career to assist me in all my future professional endeavors.

APPENDIX A

INSTRUCTIONAL ACTIVITY CODES

Instructional Activity	Code	Description
Lecture	L	Teacher lecturing to a group of students
Lecture with Discussion	LD	Teacher-led lecture, with periodic student discussion (recitation)
Class Discussion	CD	Discussion in class, students are primary discussants
Small Group Discussion	GD	Discussion in class, but in small groups, not whole group
Problem Modeling by Teacher	PM	Teacher demonstrating how to execute a task (e.g., working a math problem on board)
Student Presentation	SP	Student(s) presenting information to the class (either planned presentation or on-demand task)
Demonstration by Teacher	D	Teacher demonstrating a procedure to the class (e.g., how to safely use lab equipment)
Questioning by Teacher	Q	Teacher asking question of student(s) in group setting
Student Responding	SR	Student(s) answering questions posed by teacher (choral response included in this category)
Manipulatives	M	Student(s) working with concrete materials to illustrate abstract concepts (e.g., math blocks)
Learning Center(s)	LC	Students(s) working at planned learning center(s) individually or in small groups (computer stations can be included if they are planned activities)
Anchoring activity before lesson	AB	Use of lesson anchoring materials prior to teacher presentation of content.
Anchoring activity during lesson	AD	Use of lesson anchoring materials during teacher presentation of content.
Anchoring activity after lesson	AA	Use of lesson anchoring materials after teacher presentation of content.
Seat work—Individual	SWI	Student(s) working at desk on academic materials (independently)
Seat work Group based	SWG	Student(s) working at desk on academic materials (groups)
Cooperative learning	CL	Students working in a planned cooperative structure to complete a task.
Role playing	RP	Student(s) engaged in role play exercises (e.g., “playing store” to practice counting change).
Teacher interacting with small group	TIG	Teacher working with/talking to/helping small group of students

Instructional Activity	Code	Description
Technology use—students	TS	Technology being used by students for related learning activities
Technology use—teacher	TT	Technology being used by the teacher for presenting instructional content
Assessment activity	A	Student(s) engaged in a formalized assessment activity (e.g., test; performance)
Pull-out activity, individual or group	PO	Student(s) removed from the room—no observation of these students possible
Other	O	List “other” activities

APPENDIX B

PARTICIPANT INFORMED CONSENT FORM

I,_____ , agree to participate in a research study regarding your experiences with the purpose of this study is to identify the correlation between high levels of student engagement and instructional practices in classrooms to determine which instructional practices yield high levels of student engagement in fourth and fifth grade classrooms.

As a participant, I understand that my participation in the study is purposeful and voluntary. All fourth and fifth grade teachers in the four identified schools will have the opportunity to voluntarily participate in the study

I understand that the interviewer has been trained in the research of human subjects, my responses will be confidential, and that my name will not be associated with any results of this study. The observation will take place in my current classroom setting for a period of 30 minutes. The observers will document (a) the instructional activity, (b) level of student engagement, (c) level of cognitive demand and (d) the "learning director" for the observed classroom. All instructional activities observed will be documented using a set of codes provided on the protocol. Student engagement data will be collected based on the percentage of students that were actively engaged during a pre-determined time within the 5-minute segment. The raters will also document the level of complexity observed within each interval. The last data point to be collected with this scale is centered around the "Learning director," who directs the learning or makes the decisions about the learning activities, teacher. The information obtained from this study will remain confidential and will only be reported in statistical analysis with no specific connections made to individuals. The information will not be used to evaluate my performance. The observation protocols will be stored in a locked cabinet, accessible only by the PIs.

I understand that there is no known risk or discomfort directly involved with this research and that I am free to withdraw my consent and discontinue participation at any time. I agree that should I choose to withdraw my consent and discontinue participation in the study that I will notify the researcher listed below, in writing. A decision not to participate in the study or to withdraw from the study will not affect my relationship with the researcher, the College of William and Mary generally or the School of Education, specifically.

If I have any questions or problems that may arise as a result of my participation in the study, I understand that I should contact one of the Principal Investigators (PIs): Mrs. Yesenia M. Aponte (305-933-5204), Ms. Yanelys Canales (305-818-7999), Ms. Mayte Dovale (305-251-9176) or Ms. Bisleixis Tejeiro (305-681-2702).

Dr. James H. Stronge, chair of EDIRC, jhstro@wm.edu, (757) 221-2339(Add phone and email contact for your Chair(s) or Dr. Tom Ward, chair of EDIRC, at 757-221-2358 or EDIRC-L@wm.edu. (Dr. Ward must be included on every consent form)

My signature below signifies that I am at least 18 years of age, that I have received a copy of this consent form, and that I consent to participate in this research study.

_____

Signature of Participant Date

_____

Signature of Researcher Date

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON (Fill in the approval and expiration dates here. Example: June 4, 2018 AND EXPIRES ON June 4, 2019.

APPENDIX C

CLASSROOM OBSERVATION PHASE PROTOCOL

School: _____Teacher:_____

Time of observation:_____
Total Number of students:_____ Number of identified group:_____
List additional adults in room, including time in room, role, and number of children served:

During the observation period, please indicate for each r-minute segment which of the following instructional activities were in practice (see Table 1). There will be at least one per segment, and each segment will likely have more than one. The segment rating should be marked separately for the two groups of students: "Identified" and "Not identified." In the event that there is no way to distinguish between the two groups, make whole-group ratings in the "Not Identified" group location only.

In additional to the instructional activities, please also rate student engagement, cognitive level, and "Learning Director" for each 5-minute segment.

Instructional Activity Codes

Instructional Activity	Code	Description
Lecture	L	Teacher lecturing to a group of students
Lecture with Discussion	LD	Teacher-led lecture, with periodic student discussion (recitation)
Class Discussion	CD	Discussion in class, students are primary discussants
Small Group Discussion	GD	Discussion in class, but in small groups, not whole group
Problem Modeling by Teacher	PM	Teacher demonstrating how to execute a task (e.g., working a math problem on board)
Student Presentation	SP	Student(s) presenting information to the class (either planned presentation or on-demand task)
Demonstration by Teacher	D	Teacher demonstrating a procedure to the class (e.g., how to safely use lab equipment)
Questioning by Teacher	Q	Teacher asking question of student(s) in group setting
Student responding	SR	Student(s) answering questions posed by teacher (choral response included in this category)
Manipulatives	M	Student(s) working with concrete materials to illustrate abstract concepts (e.g., math blocks)
Learning center(s)	LC	Students(s) working at planned learning center(s) individually or in small groups (computer stations can be included if they are planned activities)

Instructional Activity	Code	Description
Anchoring activity before lesson	AB	Use of lesson anchoring materials prior to teacher presentation of content.
Anchoring activity during lesson	AD	Use of lesson anchoring materials during teacher presentation of content.
Anchoring activity after lesson	AA	Use of lesson anchoring materials after teacher presentation of content.
Seat work-Individual	SWI	Student(s) working at desk on academic materials (independently)
Seat work—group based	SWG	Student(s) working at desk on academic materials (groups)
Cooperative learning	CL	Students working in a planned cooperative structure to complete a task.
Role playing	RP	Student(s) engaged in role play exercises (e.g., "playing store" to practice counting change).
Teacher interacting with individual student	TIS	Teacher working with/talking to/helping individual student
Teacher interacting with small group	TIG	Teacher working with/talking to/helping small group of students
Technology use—students	TS	Technology being used by students for related learning activities
Technology use—teacher	TT	Technology being used by the teacher for presenting instructional content
Assessment activity	A	Student(s) engaged in a formalized assessment activity (e.g., test; performance)
Pull-out activity, individual or group	PO	Student(s) removed from the room—no observation of these students possible
Other	O	List "other" activities

These are global ratings for each 5-minute segment. Thus, each segment will have only one rating for each of these two domains—the rating that is most representative of that time period for that group.

Student Engagement	Cognitive Activity	"Learning Director"
L: Low engagement = 20% or fewer of students engaged in learning. M: Moderate engagement = 21-79% of students engaged in learning H: High engagement = 80% or more students engaged in learning	Remember Understand Apply Analyze Evaluate Create Rating are made in each segment following the given scale: 1: Not evident 2: Evident 3: Well-represented	*Who directs the learning, or makes the decisions about the learning activities.* Use the following scale for making your segment rating for the identified groups: 1: Teacher directs all learning 2: Teacher directs most learning 3: Teacher and student share learning decisions 4: Student directs most learning 5: Student directs all learning.

APPENDIX D

DIFFERENTIATED CLASSROOM OBSERVATION SCALE: SCORING FORM

School:_____ Rater: _____
Teacher:_____ Grade: _____

Activity		1			2			3			4			5			6		
Engagement		L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H
Cognitive	Remember	1	2	3	1	1	2	3	2	3	1	2	3	1	2	3	1	2	3
	Understand	1	2	3	1	1	2	3	2	3	1	2	3	1	2	3	1	2	3
	Apply	1	2	3	1	1	2	3	2	3	1	2	3	1	2	3	1	2	3
	Analyze	1	2	3	1	1	2	3	2	3	1	2	3	1	2	3	1	2	3
	Evaluate	1	2	3	1	1	2	3	2	3	1	2	3	1	2	3	1	2	3
	Create	1	2	3	1	1	2	3	2	3	1	2	3	1	2	3	1	2	3
Learning Director		1 2	3	4 5	1 2	3	4 5	1 3	3	4 5	1 2	3	4 5	1 2	3	4 5	1 2	3	4 5

APPENDIX E

OBSERVATION SCHEDULE & OBSERVERS' ROLES

Week 1	Week 2
School A	School B
School D	School C
Observation Period	Time Interval Minutes
1	00–05
2	07–12
3	12–19
4	21–26
5	28–33
6	35–40
40-58 Minutes: Debrief & Transition to Next Classroom	

School: A
Grade 4

Teacher	Observer	Focus Group	Instrument
1	YA	Student	DCOS
	YC	Student	DCOS
	MD	Teacher	DCOS
	BT	Teacher	IPEGS
2	YA	Student	DCOS
	YC	Teacher	IPEGS
	MD	Teacher	DCOS
	BT	Student	DCOS

Grade 5

Teacher	Observer	Focus Group	Instrument
3	YA	Student	DCOS
	YC	Student	DCOS
	MD	Teacher	IPEGS
	BT	Teacher	DCOS
4	YA	Student	DCOS
	YC	Teacher	IPEGS
	MD	Teacher	DCOS
	BT	Student	DCOS

School: B
Grade 4

Teacher	Observer	Focus Group	Instrument
1	MD	Student	DCOS
	YC	Student	DCOS
	YA	Teacher	DCOS
	BT	Teacher	IPEGS
2	MD	Student	DCOS
	YC	Teacher	IPEGS
	YA	Teacher	DCOS
	BT	Student	DCOS

Grade 5

Teacher	Observer	Focus Group	Instrument
3	MD	Student	DCOS
	YC	Student	DCOS
	YA	Teacher	IPEGS
	BT	Teacher	DCOS
4	MD	Student	DCOS
	YC	Teacher	IPEGS
	YA	Teacher	DCOS
	BT	Student	DCOS

School: C
Grade 4

Teacher	Observer	Focus Group	Instrument
1	BT	Student	DCOS
	YC	Student	DCOS
	YA	Teacher	DCOS
	MD	Teacher	IPEGS
2	BT	Student	DCOS
	YC	Teacher	IPEGS
	YA	Teacher	DCOS
	MD	Student	DCOS

Grade 5

Teacher	Observer	Focus Group	Instrument
3	BT	Student	DCOS
	YC	Student	DCOS
	YA	Teacher	IPEGS
	MD	Teacher	DCOS
4	BT	Student	DCOS
	YC	Teacher	IPEGS
	YA	Teacher	DCOS
	MD	Student	DCOS

School: D
Grade 4

Teacher	Observer	Focus Group	Instrument
1	YC	Student	DCOS
	BT	Student	DCOS
	YA	Teacher	DCOS
	MD	Teacher	IPEGS
2	YC	Student	DCOS
	BT	Teacher	IPEGS
	YA	Teacher	DCOS
	MD	Student	DCOS

Grade 5

Teacher	Observer	Focus Group	Instrument
3	YC	Student	DCOS
	BT	Student	DCOS
	YA	Teacher	IPEGS
	MD	Teacher	DCOS
4	YC	Student	DCOS
	BT	Teacher	IPEGS
	YA	Teacher	DCOS
	MD	Student	DCOS

APPENDIX F

CHECKLIST ADAPTED FROM IPEGS

The following checklist is adapted from *IPEGS,*
HE= Highly Effective—The professional performs at a level that consistently models initiative, raises performance through expanding knowledge, and improves individual and/or school effectiveness in a manner that is consistent with the state's and the school district's mission and goals.
E=Effective—The professional performs in a manner that demonstrates competence and expertise in meeting the standard in a manner that is consistent with the state's and the school district's mission and goals.
D/NI=Developing /Needs Improvement—The professional needs assistance/support to meet the standard in an effective manner that is consistent with the state's and the school district's mission and goals.
UN=Unsatisfactory—The professional consistently performs below the established standard or in a manner that is inconsistent with the state's and the school district's mission and goals

Performance Standard	Indicators	HE	E	D/NI	UN
	Engages students in diverse activity structures: individual, collaborative, and whole group				
	Demonstrates current knowledge of content in a logical and sequential manner				
	Uses multiple levels of questions and makes adjustments for reteaching/remediation/enrichment				
	Connects students' prior knowledge, life experiences, and interests to learning goals				
Instructional Delivery and Engagement—The teacher promotes learning by demonstrating accurate content knowledge and by addressing academic needs through a variety of appropriate instructional strategies and technologies that engage learners	Presents lessons with use of explicit instruction				
	Uses appropriate literacy strategies to build academic vocabulary				
	Uses a variety of strategies to engage students in higher-order learning tasks				
	Engages students in authentic learning, real-life applications, and interdisciplinary connections				
	Uses appropriate pace and maximizes instructional time for student learning				
	Uses technology to individualize instruction and enhance learning, as appropriate				
	Reinforces learning goals throughout the lesson				
	Provides ongoing, timely, and specific feedback to students				

APPENDIX G

DATA ANALYSIS SAMPLE FORM

School:
Teacher:

DOCS					IPEGS Indicators											
Observational Period	Primary instructional activity	Student engagement	Cognitive activity	Learning director	Indicator #1: Engages in diverse activity structures	Indicator #2: Demonstrates current knowledge of content	Indicator #3: Multiple level of questioning	Indicator #4: Connects prior knowledge	Indicator #5: Explicit instruction	Indicator #6: Use of literacy strategies	Indicator #7: Engage in higher order learning tasks	Indicator #8: Engage in authentic learning	Indicator #9: Use of appropriate pace and maximize instruction	Indicator #10: Use of technology	Indicator #11: Reinforce learning goals	Indicator #12: Provide feedback
1																
2																
3																
4																
5																
6																

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VITARUM

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Education

Doctor of Education, Educational Policy, Planning, and Leadership, January 2020
College of William & Mary, Williamsburg, Virginia

Educational Specialist in Educational Leadership**,** June 2001
Nova Southeastern University, Fort Lauderdale, Florida

Master of Science in Early Childhood Special Education, September 1996
Nova Southeastern University, Fort Lauderdale, Florida

Bachelor of Science in Specific Learning Disabilities, May 1994
Florida International University, Miami, Florida

Professional Experience

Principal & Executive Principal, MDCPS Aventura Waterways K–8 Center (2018–Present); Bunche Park Elementary (2014–2018); North Region Executive Principal for (2015–2016; 2016–2017; and 2017–2018)

- Provided instructional leadership to ensure the delivery of high standards of instruction, a balance budget and the safety and well-being of students and faculty.

Assistant Principal, MDCPS Bunche Park Elementary (2006–2014)

Professional and Community Involvement

- 2019 Synergy Presentator: Focus on Sustainable Results
- 2016, 2017, 2018, 2019 MDCPS Certified Assessor Training Tool (CATT) Master Trainer
- Participated in the State of Florida 2016 Commission Leadership Academy
- Represented MS at The White House and U.S. Department of Education to launch the My Brother's Keeper's Success Mentors initiative.
- Represented Elementary School Principals in an interview with The Urban Schools Human Capital Academy (USHCA)

Recognition and Awards

- 2016 Leonard Miller Principal Leadership Award
- 2016 Featured Council for Educational Change Legacy of Leadership Journal
- 2016 Cervantes Award: Making a Difference in Hispanic Education

YANELYS CANALES

Education

Doctor of Education, Educational Policy, Planning, and Leadership, January 2020\
College of William & Mary, Williamsburg, Virginia

Educational Specialist in Educational Leadership, June 2006
Nova Southeastern University, Fort Lauderdale, Florida

Master of Science in Special Education, June 1999
Nova Southeastern University, Fort Lauderdale, Florida

Bachelor of Science in Therapeutic Recreation June 1996
Florida International University, Miami, Florida

Professional Experience

Principal MDCPS Miami Lakes K–8 Center, (2017–Present) & North Hialeah Elementary, (2013-2017)

- Instructional leader of the school responsible for the safety of students and staff and accountability for student learning.

Assistant Principal MDCPS Lawton Chiles Middle School, (2006–2013)

- Responsible for supporting the principal as the educational leader of the school and assisting in the process of student supervision and student academic growth.

Professional and Community Involvement

- DASA Summer Institute Presenter 2017
- MDCPS Certified Assessor Training Tool (CATT) Master Trainer 2017, 2018, 2019
- MDCPS Support Dialogue Principal Committee 2018–2019
- MDCPS Based Budget Presenter 2017–2018
- MDCPS Principal's Budget Committee 2017–2018, 2018–2019
- MDCPS Employee of the Year District Selection Committee 2017–2018
- MDCPS Custodial Task Force Committee 2016–2017
- Region School Improvement Plan Review Committee 2016–2017
- Region School-wide Instructional Review Team 2016–2017
- North Region Assistant Lead Principal 2016–2017
- Feeder Pattern Articulation Team Leader 2015–2016

MAYTE DOVALE

Education

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College of William & Mary-Williamsburg, VA

Educational Leadership, December 1999
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Master's Degree, Elementary Education and Reading, December 1993
Barry University, Miami Shores Florida

Bachelor's Degree, Early Childhood and Elementary Education, May 1991
Barry University, Miami Shores Florida

Professional Experience

Principal, 2007-Present: MDCPS **Gloria Floyd Elementary** – 2016-Present; **Coral Way K-8 Center** - 2013-2016; **Springview Elementary** - 2007-2013
· Comprehensive School Operations including financial management, curriculum instruction, safety, security, labor relations, personnel evaluations, community relations. Experience at the Elementary and Middle Levels.

Assistant Principal, 2000–2007: MDCPS **Miami Lakes K-8 Center** - 2003-2007
Biscayne Gardens Elementary – 2000-2003
· Curriculum and instruction, community relations, master schedule development, personnel evaluations at Elementary and Middle Schools levels.

Educational Specialist, 1995–2000: MDCPS

Professional and Community Service

● 2009–Present—MDCPS -Certified Assessor Training Tool (CATT) Master Trainer
● 2019—MDCPS, South Region Office, Mentor Principal
● 2017–2019—MDCPS Principal's Budget Committee
● 2010–2016— MDCPS, Central Region, Feeder Pattern Lead Principal
● 2009–2012— MDCPS, Elementary 2008-2014 - Miami-Dade County Public Schools Teacher of the Year Committee

Recognition and Awards

● 2017—Youth Crime Watch, Principal of the Year—Gloria Floyd Elementary
● 2012—MDCPS, Principal of the Year Finalist—Central Region
● 2007—MDCPS, Assistant Principal of the Year, Finalist—Region 1 Center
● 1996—Teacher of the Year, Region II, MDCPS

BISLEIXIS TEJEIRO

Education

Doctor of Education, Educational Policy, Planning, and Leadership, January 2020
College of William & Mary-Williamsburg, VA

Master of Science: Educational Leadership, May 2004
St. Thomas University-Miami, FL

Bachelor of Science: Elementary Education, May 1999
St. John's University-Queens, NY

Professional Experience

Principal, MDCPS **Gratigny Elementary School, (2015–Present)**

- Plan, organize and supervise all functions essential to the operation of an effective, efficient and safe learning environment.

Assistant Principal, MDCPS **Meadowlane Elementary School; (2011–2015)**
Miami Park Elementary School (2006–2011)

- Assist the principal in planning, organizing and supervising all functions essential to the operation of an effective, efficient and safe learning environment.

Math Coach and Teacher, MDCPS Department Chairperson for the Math Department
Miami Park Elementary School (2003–2006)

- Utilized the coaching model (planning, demonstrating, providing feedback) with teachers and planned and provided site-based professional development to staff.

Professional and Community Service

- MDCPS- Certified Assessor Training Tool (CATT) Master Trainer 2017-2019
- MDCPS- Third Grade Portfolio Review Team Member for North Region
- MDCPS- Business Management Review Team Member for North Region
- MDCPS- Principal Preparation Program Participant
- MDCPS- Office of the Year Selection Committee Member for Region 1
- MDCPS- Assistant Principal Steering Committee Member for Region 3
- MDCPS- Paraprofessional of the Year Selection Committee Member for Region 3
- Member, Association for Supervision and Curriculum (ASCD)
- Member, Dade Association of School Administration (DASA)
- Participated in The Principals' Center-Improving Schools: The Art of Leadership, Harvard Graduate School of Education